Clinical Medicine

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Dr. Victor C. Vaughan

VICTOR CLARENCE VAUGHAN was born at Mt. Airy, Randolph County, Missouri, October 27, 1851, the son of John and Adeline (Dameron) Vaughan.

After completing the work in the elementary schools he attended Mt. Pleasant College, Huntsville, Missouri, from which institution he was graduated in 1872, with the degree of Bachelor of Science.

Thirsting for more knowledge, he went to the University of Michigan, where he received the degrees of M.S. in 1875, Ph.D. in 1876 and M.D. in 1878. Since then he has received the honorary degree of Sc.D. from the Universtiy of Western Pennsylvania, and that of LL.D. from half a dozen institutions of learning. He studied also in the University of Berlin.

He became assistant in the Chemical laboratory at the University of Michigan in 1875. In 1876 he was appointed Instructor in Physiologic Chemistry, and the next year he married Dora Catherine Taylor, of Huntsville, Missouri.

His progress in the field of medical education was rapid and steady. With Dr. William J. Herdman he inaugurated the first instruction in practical pathology which was given at the University. He became Assistant Professor of Chemistry in 1880; Professor of Physiologic and Pathologic Chemistry and Associate Professor of Materia Medica and Therapeutics in 1883, and Professor of Hygiene and Physiologic Chemistry in 1887.

The Hygienic Laboratory was opened in 1888, and Dr. Vaughan became its first Director.

In 1891 he was made Dean of the Department of Medicine and Surgery of the University—the first graduate of the College to hold that position—and carried the heavy and responsible duties of the office until 1921—a period of thirty years—during which time the University and the Medical Department grew to a size and importance scarcely dreamed of in the earlier days.

In 1898 Dr. Vaughan was commissioned a Major and Surgeon of the 33rd Michigan Volunteer Infantry and served in the Santiago Campaign, being appointed Division Surgeon the same year, and recommended by the President for the brevet grade of Lieutenant Colonel, Medical Corps, U. S. A.

When the Spanish War was over he was made a member of the Commission to investigate the typhoid conditions in the concentration camps in the United States, and we, who were later his students, used to sit in awed admiration of his phenomenal memory while he gave us, in detail, the statistics of the deplorable hygienic conditions which resulted in the death of thousands of our young men in those camps.

When the United States entered the World War, Dr. Vaughan was commis-

sioned a Colonel, Medical Corps, and was placed in charge of the division of communicable diseases. For his notable services in this post of duty he received the Distinguished Service Medal.

The doctor is a member of the National Academy of Sciences, the American Philosophical Society, the French and Hungarian Societies of Hygiene and is a Knight of the Legion of Honor, of France. He has been president of the Association of American Physicians and of the American Medical Association.

His contributions to medical literature have been considerable. His best known books are a "Text-book of Physiological Chemistry," which has run through three editions, and his three-volume work on "Epidemiology and Public Health." He has collaborated in the writing of several other volumes and has given more than a hundred and fifty articles to the current periodicals, as well as having been Managing Editor of the *Journal of Laboratory ana Clinical Medicine* from 1915 to 1923.

Two of Dr. Vaughan's sons are well-known physicians. Dr. John W. Vaughan is a surgeon in Detroit and Dr. Warren T. Vaughan an internist in Richmond, Va.

The doctor has always been a teacher of remarkable power, possessing those gifts of copious information, ready speech and infectious enthusiasm which have endeared him to many classes of students who wondered at his immense fund of knowledge; honored and respected him for his power to impart it; and loved him for his wide, human qualities of understanding and helpfulness.

He has been, for many years, an international figure in all matters having to do with hygiene and physiologic chemistry, and is now Chairman of the Medical Section of the National Research Council, at Washington, D. C.

A trained mind can be applied to a new subject, and will grapple with it and master it in a way impossible to the untrained; and this is the use of education.—*Annie Besant.*

THE ARNETH BLOOD COUNT

There is a laboratory procedure which can be readily carried out by anyone who is familiar with the technic of differential leucocyte counts and which, while little used in this country, at present, is considered of a good deal of importance in Europe and, especially, in the orient. This is known as the Arneth Blood Count.

The technic of this procedure consists in making a thin and even blood film on a slide and staining it with Wright's stain, the same as for making an ordinary differential leucocyte count. From 100 to 200 polymorphonuclear neutrophile leucocytes are now carefully studied and classified as to the *number of lobes in their nuclei*, being recorded as "Class I, II, III, IV and V," according to the number of nuclear lobes.

Arneth has stated—and his work has been verified by other observers—that the normal count approximates the following:

Class	I	II	III	IV	V
Percentage	6%	35%	42%	16%	1%

The count is said to "shift to the left" when the percentage in Classes I, II and III is increased, and "to the right" when more leucocytes of Classes IV and V are found.

The "Arneth Index" is obtained by adding the total percentages in Classes I and II, and *half* the number in Class III, the normal index thus being 62. It will be readily seen that when the count "shifts to the left" the index will be high, and low when it "shifts to the right."

The value of this count, for diagnosis and treatment, is based upon the idea, now pretty generally accepted, that leucocytes having fewer than three lobes to their nuclei are *immature* and possess less phagocytic power than do those with the greater number of nuclear lobes.

In the *Indian Medical Gazette*, for March, 1915, Knapp states his observations to the effect that the Arneth count shifts to the left in tuberculosis, measles and malaria; and to the right in syphilis, amebic dysentery, anchylostomiasis and leprosy, the shift being especially marked in the last-named disease.

We, personally, made some observations on 22 cases of syphilis some years ago, and found the index to be below Arneth's normal of 62 in 17 of the cases (77.2%). In only two was the index above 70. Whatever significance this small series may possess is increased by the fact that in several normal controls, examined during the same period, the index averaged 65, instead of 62. The cases of syphilis were all confirmed by several clinical signs and, in most cases, by positive Wassermann tests.

The value of the Arneth count, for diagnostic purposes, is not fully established. It should not be used to take the place of better-recognized diagnostic procedures, but may give valuable *corroborative* evidence in difficult cases where the diagnosis is in doubt.

Its field of greatest value, at present, lies in the diagnosis and prognosis of cases of tuberculosis.

Kramer (*New York Medical Journal*, June 14, 1913) found that the *stage* of a tuberculous infection was quite accurately indicated by the Arneth count, the shift to the left being regularly increased as the disease advanced. In normal controls he found the index to be 56.5; in incipient cases of tuberculosis, 67.2; in moderate cases, 72.5; in advanced cases, 81.0; and in the terminal stages of the disease, 86.5.

He also found that an improvement in the condition of the patient was accompanied by a shifting to the right of the Arneth count, so that such a shift came to have distinct prognostic importance. A sudden shift to the left, on the other hand, was found to presage a relapse.

Rayevsky (*The Practitioner*, 1914, p. 413) corroborates these results.

We all need all the assistance we can get in determining the prognosis in early cases of tuberculosis and it seems reasonable to believe that, in those persons whose Arneth index is relatively low, the outlook is much brighter than it is for those showing a relatively high index.

Those who are practicing in the tropics should remember that Chamberlain has noted (*Journal of Tropical Diseases and Preventive Medicine*, July, 1914) that the Arneth count shifts to the left in persons living in tropical countries, and that this is more marked in those who were born and reared there than it is in temporary residents.

Here, then, seems to be a simple laboratory procedure which may give us help in cases where we need it badly.

The summer insect can not speak of ice; the frog in the bottom of the well should not talk of the heavens.—*Chinese Proverb.*

FACTS AND PRINCIPLES

There is a very distinct and definite limit to the number of isolated facts which a man can remember. Some can, of course, remember more and some less, but each one of us has a limit in this direction, beyond which he cannot go.

Every fact which we know will help us just so far as it goes and not a bit further. If the problem varies at all, the learning of a new fact is required to meet the situation.

Another point to remember is that when we have acquired knowledge of a certain fact there is no assurance that we know the *truth*. I see the sun rise in the east. That is a fact—but it is not the truth. Although my senses tell me that the sun moves upward I must check this fact by my collateral knowledge and my reason in order to arrive at the truth that it is the earth which moves and not the sun.

But we are not limited in our mental scope to the acquisition of facts. We have the *power*—if we have the desire and industry and patience—to familiarize ourselves with *principles*, and when we know one of these we are in a position to deduce any fact falling under it. For example: we have learned the principle that in cases of severe arterial hemorrhage we must place a tourniquet or a ligature between the bleeding point and the heart. From this principle we can deduce the fact of the proper location for our ligature in any case; without it we would be compelled to memorize the points for applying hemostasis concerning every principal artery in the body—an enormous task!

Time was when teaching consisted in forcing students to memorize large numbers of isolated facts. That day is, fortunately, passing—though by no means wholly past—and the newer pedagogic practice tends, more and more, to inculcate principles and encourage the students to apply them to the elucidation of the facts with which they come in contact.

If we would all spend as much time as possible in studying the principles of the science and art of medicine we would all rapidly become more resourceful and efficient physicians and happier men, for we would be gaining that type of knowledge which is power and which leads, at last, to the achievement of Wisdom.

A mind that can serenely view the phenomena of the universe, and be undisturbed, has found its place in Nature.—*A. B. Jamison.*

CALOMEL

Calomel is the mild chloride of mercury (*Hydrargyri Chloridum Mite*) and, though an insoluble salt, is readily absorbed by the body.

Physiologic Action.—Calomel acts as a purge by reason of the fact that it stimulates the secretions of the intestinal glands, and, in common with other salts of mercury, it probably causes some degree of stimulation of all secretory glands. The mechanism of its specific effect upon the liver is open to question, some claiming that it actually increases the secretion of bile,

and others that it merely facilitates the emptying of the gall-bladder into the duodenum. Certain it is that "bilious" stools follow its administration.

There is little doubt that, in some cases, it exerts a distinct diuretic action, especially if its purgative effects are controlled by small doses of opium, but the mechanism of this action is unknown.

Therapeutic Uses.—The most generally recognized use of calomel is as a laxative purge and for this purpose it is most useful, given in small, repeated doses, in cases where the tongue is coated; the breath foul; the digestion upset; the stools pale, pasty and stinking; and the patient generally "under the weather" or "bilious," with slight jaundice and headache.

In such cases it is a good idea to combine the calomel with sodium bicarbonate, which facilitates its absorption by rendering the stomach less acid and the duodenum more alkaline.

Another combination which is of great value is the addition to the calomel of *podophyllin*, with or without the further addition of ox gall or the salts of the bile acids (bilein).

The old superstition that vegetable acids, such as lemonade, orange juice and the like should not be given with calomel has been entirely exploded. The amount of corrosive sublimate which can be formed in the body from calomel, even under the most favorable conditions, is infinitesimal. The danger of salivation from the use of calomel, in ordinary therapeutic doses, is extremely small, but the bad name given it by Samuel Thompson and his followers still clings, especially in rural districts, and will probably outlast this generation.

Modern research has failed to support the old claim that calomel exercises an antipyretic effect, but it still remains true that a calomel purge, followed by a saline, at the beginning of *all acute infectious fevers*, produces very pleasing results, probably by relieving the body of accumulations of toxic wastes.

For its diuretic effect, in cases of *dropsy*, it may well be combined with digitalis or squills and, usually, with some preparation of opium.

In convalescence from acute diseases, if the tongue has a thick, yellow coat, the appetite is absent and the digestive processes difficult and sluggish, a brisk calomel purge frequently causes the clouds to lift in a surprising manner.

In *acute dysentery* small doses of calomel (combined, at times, with ipecac) may be given every hour until the number and character of the stools improve. It will also relieve some cases of vomiting, but, in other cases, the effect may be just the reverse, and one can never tell, until it has been tried, which will happen.

Applied *locally*, calomel powder is sometimes of value in tuberculous phlyctenular conjunctivitis and for drying up syphilitic condylomata. It is also used, in the form of a 40-percent ointment in benzoinated lard, as a *prophylactic against syphilis*, after sexual exposure. In the constitutional treatment of syphilis it is decidedly inferior to some of the other mercurial salts.

Poisoning with calomel is exceedingly rare in these days. When it occurs it begins with a brassy taste in the mouth and tenderness of the gums and tongue. One or more teeth feel too long and are painful when bitten upon. The breath is fetid, the salivary glands secrete freely, the inside of the mouth and the tongue are swollen and ulcers appear on the edges of the tongue and gums. The *treatment* consists in withdrawing the drug and administering *sodium thiosulphate*.

Contraindications.—Calomel should not be given in cases of acute or chronic nephritis, in obstructive jaundice nor to those—especially children—who are very weak and debilitated. It should never be used, locally or internally, when *iodides* are being given as it tends to form mercury biniodide. It is also incompatible with the *bromides* and with *antipyrin*, with which last drug it forms a very poisonous compound.

Calomel should never be used as a routine laxative and is unsuitable for domestic medication.

Administration.—The doses of calomel given by our grandfathers would, today, cause us to shudder, for we have found that they are wholly unnecessary, except in the tropics, where small doses seem to be ineffectual and 5 to 20 grain doses are frequently required. Small doses are equally effective because only such parts as are transformed into the gray oxide by the action by the alkaline juices of the bowel can be absorbed.

In ordinary cases the dose should be from 1/10 to ½ grain, repeated every fifteen to thirty minutes until 1 to 2 grains have been taken. This should usually be followed, after an hour or two, by a saline laxative.

The most convenient form for its administration is in tablet triturates, with sugar of milk or with sodium bicarbonate, or in granules. The triturates should not be compressed and should be reasonably fresh, as they deteriorate with age.

Calomel being tasteless, will be readily taken by very young children, especially if mixed with a little cane sugar.

Children under 3 years of age are rarely salivated by mercury, but this is no reason why we should be careless in the use of calomel in pediatric practice.

In conclusion, calomel is one of the truly indispensable drugs, indicated in many conditions; having few contraindications; and to be used every day and in almost every case, at some stage of the illness.

When the stomach is involved, wisdom withdraws. —*Arabian Proverb.*

HALF-BAKED OPINIONS

When a man has had sufficient experience along any line and has given that experience enough thought to enable him to form an opinion which has any value, he should be ready and willing to express that opinion *whenever it is called for*, whether it coincides with the opinions of others or not.

If his opinion is at variance with that of other capable men who have studied the subject, he should be especially careful to verify his own findings and check the validity of his conclusions upon them, so as to be able to defend his position successfully if it is attacked.

The intrusion, even of sound opinions, at inopportune times and when they have not been requested, is indefensible; and the expression of an opinion upon any subject regarding which one is uninformed is always dangerous—unless it is prefaced with a statement to that effect—because it may result in one's being convicted of ignorance and the dissemination of raw or half-baked ideas.

These observations were provoked by an article in the *Indiana State Journal of Medicine*, which related how a physician, who should have known better, told a patient that the x-ray treatments which a competent roentgenologist had recommended for carcinoma of the eyelid would destroy his sight; and another who advised a patron that "insulin is a patent medicine, gotten up to sell, and is killing thousands of diabetics."

These highly injudicious and groundless opinions were a disgrace to an enlightened profession and may have resulted in irreparable injury to these patients.

Study, think and do a lot of listening. Form sound opinions about the matters upon which you have adequate information and, when the opportunity offers, express these opinions, clearly and briefly, and defend them to the last ditch.

Regarding subjects upon which your information is meager or wholly lacking, maintain a discreet silence and hear what the fellow who knows has to say. So shall you gain wisdom and understanding and also an even greater *reputation* for possessing these qualities.

A fool uttereth all his mind, but a wise man keepeth it in till afterward.—*Prov.* 29:11.

THE CARNAGE OF WAR—AND OF PEACE

We were looking over some statistics of the War the other day, and the recital of the casualties of that recent and terrible conflict was appalling.

And then the thought drifted to other wars, and to the casualties of peace and some interesting ideas emerged. The men killed in battle during the four years of the Civil War were less in number than the people who died of tuberculosis in this country in the four years between 1906 and 1910. Even in the World War it was a great battle where more than 15,000 men were killed; and yet more than that number are killed by automobiles in the United States every year—many more than all the deaths from battle and disease during the Spanish-American War.

And then, look over the statistics of deaths from typhoid, malaria, syphilis, tuberculosis, diphtheria and all the long list of diseases due to well-known and controllable causes. All these deaths were preventable — unnecessary — and their total for a year and a half would not be far, if at all, behind the deaths on the battle-fields of France; certainly not if we add to the list the fatalities which annually result from various types of heart-disease, nephritis and diabetes and which are equally preventable, not by organized community and state hygiene and sanitation but by the reorganization of personal ways of living—by intelligent and continuous individual self-government.

But, you say, the War robbed us of our young men—the flower of our Nation. True, but how of those who *should* be our young men fifteen or twenty years hence, but *will not be*, because they are dying, today, as a result of overcrowding, underfeeding, overwork, too little sunshine and all the other various life-destroying conditions which grow out of some of our present-day social and political adjustments? How of the children who are needlessly dying because of ignorance on the part of their parents or those responsible for their nurture and up-bringing?

Others will declare, "The dead are the fortunate ones. It is the living—the cripples and the maimed, in body or mind—who are the real sufferers."

True, again, but how of the cripples from poliomyelitis and rickets and tabes and from our needless industrial accidents and those of our highways? How of the thousands who are maimed and disfigured every year by syphilis and by cancer—not yet preventable, but the day is coming. How of the other thousands whose minds are darkened because of paresis or dementia precox or some other form of mental alienation?

Indeed, peace has its carnage no less than war and little if any less terrible when the total figures are seen—only less dramatic, because there are no bursting shells, no wire entanglements, no hostile aeroplanes and no patriotic songs to go with it.

In the stirring days of 1917 and 1918, eloquent "minute men" plead with us daily to buy bonds "until it hurt"—and we bought; some of the biggest men and most powerful thinkers in the country gave their services to the Government for a dollar a year to help in devising and executing plans to circumvent the enemy; and, in spite of all the blunders that were made, the plans succeeded, in the end.

Today we are at grips with an enemy that is killing the mature men who are the present mainstay of our Nation; the young men, who are its immediate hope; and the children in the cradles, who are its future salvation.

That enemy presents itself under two guises and bears two names, and they are *Ignorance* and *Selfishness*.

If our great men—our orators, our financiers, our captains of industry—would devote a tithe of the time and effort to routing these enemies at home that they spent upon circumventing enemies who wore German helmets; if our people, as a whole, would devote a small fraction of the money and the patriotic enthusiasm to ridding our Land of these destroyers that they poured out so freely to rid France of an alien foe, the day would soon dawn when we could walk the streets in safety and carry on our occupations in peace and joy.

The medical profession is the Regular Army—the first-line troops—of this campaign of National defense. From it must come the great generals to plan and direct and the subordinate officers to execute the plans. From our ranks must go up the rallying-cry that will rouse our fellow-citizens to the imminence of their peril and enlist that generous and enlightened cooperation by means of which, alone, victory is possible.

Are we discharging our full duty, to our Country and to humanity, when we have cared for and instructed those who voluntarily seek our aid and counsel? Have we no call to go out and labor, *strenuously* for the consummation of those ideals which we alone know to be within the bounds of reasonable possibility?

Let us commune with ourselves in all sincerity and humility, and pray for the courage, wisdom and strength to follow every ray of inner light which may be given us.

Leading Articles

Acute Appendicitis, Its Differential Diagnosis, Surgical Anatomy and Operative Treament

By EMERY M. FROMMER, M.D. St. Joseph, Mo.

IN SPITE of our present advanced knowledge and experience on appendicitis, this disease is still accompanied by a mortality, which cannot fail to impress us profoundly. Warnshuis[1] in his recent discussion says, "there is an apparent laxity, nearly bordering on indifference, as to our attitude toward this surgical entity." His statistics, obtained on eleven thousand four hundred cases, shows an average mortality in acute appendicitis of 4.23 percent and an average operative mortality of 1.68 percent for removal of the chronically inflamed appendix; the average total mortality for both acute and chronic cases being 2.9 percent in 11,400 appendicitis cases.

The outstanding factors that have paramount importance on the mortality are unquestionably the correct early differential diagnosis and the operative treatment.

Differential Diagnosis

Careful study and analysis of the history, onset and symptoms should be made in order to arrive at the correct diagnosis. Murphy,[2] in his classic description, said that the order of symptoms is all-important in making a diagnosis of acute appendicitis and emphasizes the uniform order of symptoms as: pain, nausea or vomiting, local tenderness, elevation of temperature and leukocytosis.

It is well known that the early symptoms of acute appendicitis are, in many instances, nowise indicative of the gravity of the pathologic changes and that there are a good many cases lacking the typical manifestations of appendicitis.

The pain is referred usually at first to the epigastrium, gradually changing to the right iliac fossa or to the location of the diseased appendix. The importance of McBurney's point, as the point of maximal tenderness, is highly overestimated, since the pain may be referred to various parts of the abdomen, depending upon the position of the appendix.

The initial pain is due to the distension and hyperperistalsis of the cecum pulling upon the peritoneal attachment. As soon as the inflammatory process progresses and involves the muscular coat of the vermiform process, the peristalsis ceases and with it the colicky character of the pain, but the continuous sensitiveness and tenderness on manual pressure remain.

The muscular rigidity is localized, after a few hours, to the area of the appendix, the location of this area being always dependent upon the location of the appendix in the abdominal cavity and can be observed often in the right hypochondrium or left lower abdomen or in the umbilical region.

The vomiting as a symptom is not always present. Since it is a reflex phenomenon indicating the irritation of the parietal peritoneum, it is absent or only slightly pronounced when the inflamed appendix is buried between coils of intestines.

The elevation of temperature is not a constant sign, for in many cases of gangrenous appendix the temperature may be either normal or subnormal.

The leukocytosis, alone, is often misleading, for, in many cases of acute appendicitis, the total number of leukocytes may be normal or only slightly elevated at a time when the appendix is gangrenous or ruptured. The leukocyte count should always be made with a differential count, this latter being of high importance if compared with the total number of leukocytes, a high level of leukocytes and the high percentage of the polymorphonuclears indicating active inflammatory changes with a favorable prognosis; while a decrease in leukocytes and increase in the polymorphonuclears point to grave infection with low resistance, as found in cases of ruptured appendix with rapidly spreading peritonitis.

Obscure Cases

The diagnosis of acute appendicitis, under ordinary circumstances, is a simple matter and a differentiation from other acute abdominal affections does not offer difficulties; but there are a large number of cases, where the symptoms of appendicitis are not pathognomonic of this disease, being so vague and confusing that the diagnostician encounters great difficulties.

In combating these possible difficulties some prominent symptoms deserve especial attention. One of the most valuable signs in acute appendiceal affections is represented by the propagated pain, which appears in the appendix region on deep manual pressure applied to the *left* iliac fossa. This sign, observed and described by Rovsing, proved to be accurate in nearly 100 percent of suspected acute appendicitis cases and can be explained by the mechanically created distension of the involved cecum and ascending colon caused by a reflux of the intestinal contents. This phenomenon may be obtained on the horizontally-lying patient by pressing the palpating fingers gradually into the left iliac fossa. Taking the palpating fingers suddenly off this area, the patient feels an excruciating pain in the opposite flank, i. e. in the appendix region.

Another important sign of acute appendicitis is the skin sign first described by Sherren and recently discussed by Livingston. This skin sign is localized within a triangle, the upper limb of which extends from the navel to the uppermost point of the right iliac crest, the lower limb extending from the uppermost point of the right iliac crest to the right pubic spine and the base of the triangle extending from the right pubic spine to the navel. Marked hyperalgesia of the skin, obtained by a twisting pinch within this triangle, points to the presence of acute appendicitis. Livingston found this sign to be positive in 84.9 percent of acute appendicitis cases and it was negative only in cases of gangrenous or ruptured appendix.

Last, there is an almost constantly present symptom in appendiceal involvement which is characterized by a sudden and sharp pain in the right iliac region, produced by the passive rotation of the patient's body. This sign is obtainable when the patient is sitting on the edge of the bed. Bending the hip and knee joints at a right angle; grasping both shoulders of the patient and rotating the body to the left, the patient notices a sharp pain in the right iliac region after a slow rotation of 70 to 80 degrees. This symptom proved to be reliable in 98 percent of acute appendicitis cases.

By means of these differential diagnostic symptoms the diagnosis of acute appendicitis can be safely made in nearly all instances and the suspicion of a perforated gastric ulcer, cholelithiasis, nephrolithiasis, acute pyelitis, acute salpingo-oophoritis, torsion of an ovarian cyst, acute intestinal obstruction and acute pancreatitis can be abandoned.

The differentiation between acute appendicitis and intraperitoneal hemorrhage, such as ruptured ectopic pregnancy or ovarian hemorrhage, can be secured by the routine blood count, this latter showing in cases of internal hemorrhage a considerable decrease of the red corpuscle count and hemoglobin.[1]

Surgical Anatomy

The appendix is attached above to the cecum and behind to its mesenteriolum, this latter being continuous with the lower leaf of the mesentery of the terminal ileum. The structure most frequently found under McBurney's point is the ileocecal valve. This point is found on the straight line drawn between the anterior, superior iliac spine and the umbilicus, 2.6 inches from the anterior, superior iliac spine (Fig. 1).

The distance between the anterior, superior iliac spine and the umbilicus, however, varies between three inches, in a thin, small person, and as much as twelve inches, on a large,

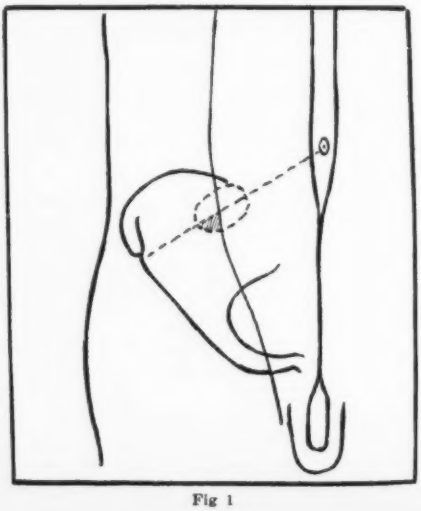

Fig 1

fat abdomen. The junction of the outer and middle third of this line is, therefore, a safer determination of McBurney's point. The appendix joins the cecum about one

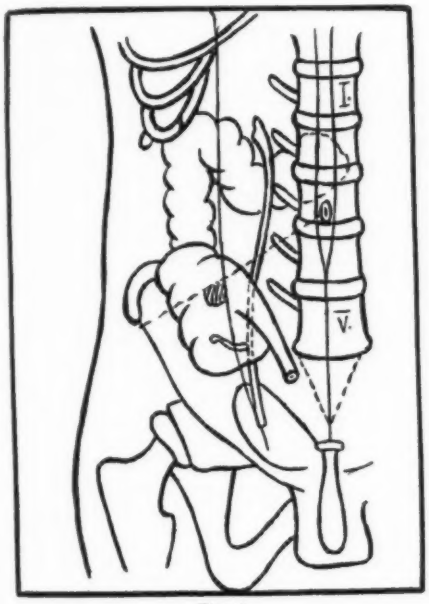

Fig. 2

inch below this point (Fig. 2). As mentioned above, the pathologic importance of McBurney's point is highly overestimated, this indicating only the site of the ileocecal valve, but does not demonstrate by any means, that the chief point of the disease is there, as stated, also, by McBurney himself.

The appendix, when not adherent, may occupy a number of positions. Mariau says, "The appendix is very movable and may occupy, even in the same subject, all sorts of positions, according to whether it and the cecum are distended with gas or empty."

Anatomically, the appendix may be found:

1.—Hanging into the plevis;

2.—Resting on the terminal portion of the ileum;

3.—Lying along the outer side of the ascending colon;

4.—Lying behind the cecum and ascending colon in the retrocecal fossa.

There are a number of abnormal positions, as: the location of the appendix in the left iliac fossa, in cases of transposition of the viscera or, in rare instances, of partial aplasia of the colon; the lodging in a hernial sac or one of the ileocecal fossae. Pathologically it may become adherent to different intraperitoneal structures, may be partially destroyed by previous inflammations or hidden in an ileocecal intussusception.[4]

Locating the Appendix

The place in which the appendix will be found can often be conjectured before the operation. If during the acute attack there has been a pain over an area on the left side, corresponding to McBurney's point on the right side, the appendix will be found to be adherent across the median line. If the pain has been radiating upward to the right hypochondrium or backward to the lumbar region, the appendix will most likely lie along the outer side of the ascending colon.

Upon opening the abdomen the appendix is located by passing the right index finger into the wound, following the parietal peritoneum of the abdominal wall from the outer edge of the wound outward to the flank and thence inward and downward across the iliac vessels and finally upward along them until the finger hooks up the mesoileum, this being the one fixed structure in the right iliac fossa. By lifting the terminal portion of the ileum into the wound, it can be readily followed outward to the cecum, wherever that may be, and the base of the appendix is thus found. In making this sweep of the finger much time is saved and many hazards avoided in forcibly picking up, immediately, the cecum itself.

In locating the appendix no other method proved to be so satisfactory as locating the mesoileum and the base of the appendix and following and freeing it to its tip.

Operative Indications

Before describing in detail the operative technic of acute appendicitis, some all-important general principles should be borne in mind.

Acute appendicitis should be operated upon as soon as the correct, early diagnosis is made, while the pathologic changes are still confined to this structure, i. e., in the first twenty-four hours. By such an early operation the appendix can be removed before perforation has occurred and the infection penetrated to the peritoneum. In this stage an aseptic operation can be done; no drainage is required; the abdomen can be safely closed in nearly all cases; and the danger in operation is scarcely greater than that of any simple intraabdominal manipula-

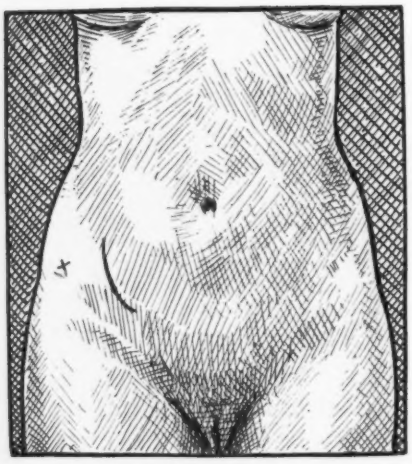

Fig. 3

tion. If operation can be done, in acute cases, before suppuration has occurred, there should be no mortality. The operation should be quick and with the least possible manipulation and traumatism of the structures. The operator should not be tempted to do too much.

Preoperative Preparation

When the differential diagnosis of acute appendicitis is made, all foods, fluids and laxatives, by mouth, should be withheld. The stomach should be washed out, if there is continuous vomiting, and a soapsuds enema should be given with low stream, to avoid distension of the colon, and the urinary bladder should be emptied. The whole abdomen should be shaved and ¼ grain of morphine, with 1/60 grain of atropine should be given, hypodermically, 45 minutes before the operation.

When the patient is on the operating table and is relaxed by the induced general anesthesia, tincture of iodine (3-percent) is painted over the whole abdomen with a sterile sponge. This is allowed to dry for a few minutes and should then be wiped off with alcohol. If the iodine is left on the skin there is a danger of its being carried into the peritoneal cavity by the surgeon's finger, this resulting, in rare instances, in a fibrous peritonitis.

When iodine is to be used for preparation of the abdomen, the shaving must be done dry, as iodine does not penetrate a wet skin.

Finally, the region upon which the operation is performed should be carefully isolated by sterile sheets and towels, these being fixed to the skin with sterile clamps.

Operative Technic

The abdomen is opened by a slightly curved incision, which begins one inch above and one inch and a half medial to the right anterior, superior iliac spine, passing vertically downward, making a slight curvature inward, pointing toward the median line, and measuring about four inches in length (Fig. 3).

The skin and subcutaneous tissue are divided and all bleeding points carefully clamped and tied with fine catgut or braided silk.

Two retractors are now placed in the wound to drag apart the edges, thus exposing the aponeurosis of the external oblique muscle. This latter should be incised with the knife, ½ inch lateral (external) to the skin incision, an opening of about one inch being made (Fig. 4).

The edges of this small opening are now seized with two straight hemostats and held by the assistant, while the operator enlarges this incision with a pair of straight scissors, up and down the line of incision corresponding precisely in direction with the line of the skin incision. By dividing the aponeurosis ½ inch lateral to the skin incision two aponeurosis flaps of equal size are obtained, making the later closure very easy. (When splitting the aponeurosis in the skin incision the medial flap of the aponeurosis would be too close to the lateral margin of the rectus

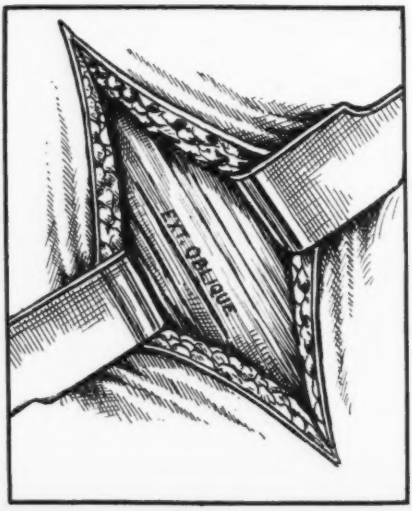

Fig. 4

sheath and consequently too narrow for closing it neatly by interrupted sutures.) This type of incision is very useful, as it affords an excellent opportunity to inspect, and if necessary to operate upon other abdominal and pelvic organs.

After splitting the aponeurosis its edges should be separated bluntly with the closed tip of a tissue forceps, from the underlying internal oblique muscle for a distance of about ¾ inch.

The internal oblique and transverse muscles are now split in the direction of their fibers, that is, at almost a right angle with the aponeurotic incision (Fig. 5).

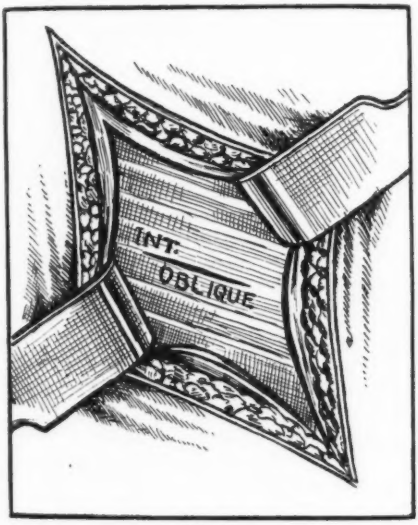

Fig. 5

This separation of the muscle fibers is easily effected by making a small incision and enlarging it by introducing both index fingers and gently pulling the fibers apart. This step should be gently and neatly done and should leave the fibers smooth and unfrayed.

These muscle edges being now retracted, the peritoneum is next carefully lifted with two mouse-tooth forceps and a small incision is made parallel to the skin incision (Fig. 6). Unless the greatest care is used in this step, an underlying loop of intestine or omentum may cut, especially if it is adherent to the parietal peritoneum. The peritoneal edges are now seized with two straight clamps and the incision enlarged with a pair of straight scissors in both directions, upward and downward, for about two inches. If it is found, later, that more

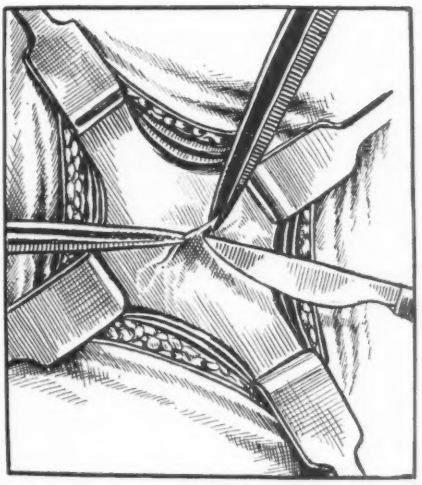

Fig. 6

room is needed, the incision may be enlarged at either end.

In many cases the cecum may present itself as soon as the peritoneal cavity has been opened. If it does not, the operator introduces his right index finger into the abdominal cavity and searches for the mesoileum as described above. If this method fails to identify the ileocecal junction, search must be made in the right hypochondrium or in the left lower abdomen.

If any stripping of dense adhesions has to be done, it is very important to pack off the operation field with gauze strips, to avoid the escape of possible septic matter into the free peritoneal cavity. In separating the firm adhesions, gauze should be wrapped around the finger and with gentle stripping the adhesions are wiped away.

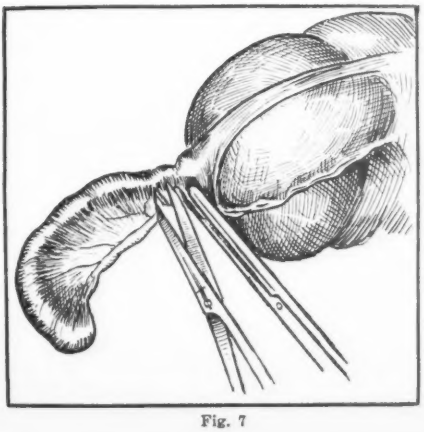

Fig. 7

It is a safe rule to keep near the appendix and to strip all other structures from it, not to detach the appendix from them. After liberating the appendix the cecum should be gently rolled out, whenever possible, and as much as possible of the later work done outside of the abdomen, the cecum being carefully walled off by flat sponges.

The mesenteriolum of the appendix is now clamped off with a straight hemostat and divided beyond this hemostat by curved scissors (Fig. 7). The tip of the hemostat should be placed close to the base of the appendix. This latter step is very important in order to avoid hemorrhage, for the appendicular artery sends a small branch into the cecoappendicular angle, this being very often the source of bleeding after dissecting the mesenteriolum and causing great difficulties in clamping it, when it has slipped back between the leaves of the mesentery (Fig. 8).

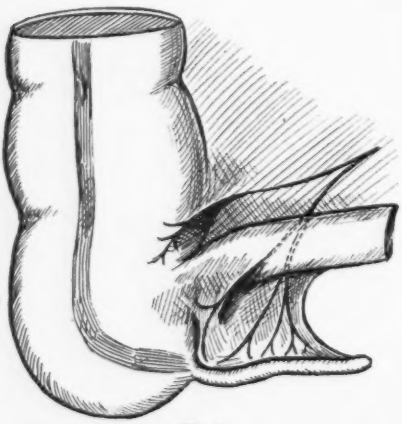

Fig. 8

The clamped portion of the mesenteriolum is now ligated by piercing it with a curved round needle, armed with catgut; this latter, being firmly tied beneath the hemostat, the hemostat can be removed.

The appendix is then held vertically by the assistant, by means of a small clamp, while the operator crushes its base with the enterotribe. Removing the enterotribe it will be found that the mucous and muscular coats have been pressed away and only a small ring of the submucous and serous coat remains (Fig. 9).

At the lower margin of this ring a fine catgut ligature is tied, and ¼ inch beyond this a clamp is placed on the appendix. The appendix is now cut off by the knife on

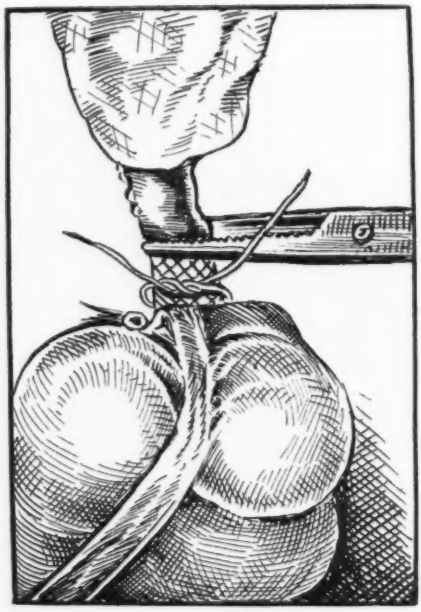

Fig. 9

the upper margin of the crushed ring. The knife and instruments used in cutting off the appendix are instantly discarded. The stump is carefully held up by the ligature, so that the end will not contaminate the adjacent tissues and is cauterized with the actual cautery or touched with pure phenol, followed by alcohol to stop its action.

The ligature on the appendix is now cut short and the stump buried into the cecum, by simple, interrupted, Lembert sutures, of

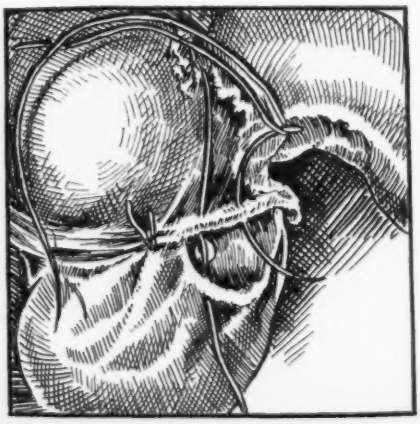

Fig. 10

which the first is placed so as to bury the stump itself (Fig. 10). To each side of this central suture one more suture should be applied to secure a safe closure. These Lembert sutures are preferable to the purse-string suture for, in many cases, the cecal wall is considerably infiltrated, making the use of a purse-string suture impossible. Also, the former method is more simple and quick. Care should be exercised to avoid piercing the lumen of the cecum. The point of the round needle should enter the cecal wall ¼ inch away from the appendix stump and leave the bowel ¼ inch away on the opposite side, fine catgut or braided silk being used for this procedure.

After inspecting the operation field to be sure of exact sutures and hemostasis, the wound edges should be lifted up by two retractors, this resulting usually in the easy return of the cecum to the abdomen. In every case of suspected infection drainage should be established by means of rubber tubes and gauze strips.

After making sure that all pads are accounted for and that the field is dry, the parietal peritoneum is seized by clamps on both sides and at the upper and lower angles. A running, plain catgut suture closes the peritoneum, while all four clamps are lifted up by the assistant to avoid any injury of the bowels and omentum.

Two or three interrupted catgut sutures will be sufficient to close the muscles (Fig. 11). These sutures should not be tied tightly enough to cause circulatory disturbances in the fibers.

The aponeurosis of the external oblique muscle is closed by six or eight interrupted, plain catgut or braided silk sutures, not applied too closely, in order to avoid possible necrosis of the aponeurosis.

The skin incision is finally closed by metal clips or interrupted silk sutures. The wound-line is now painted with tincture of iodine and thoroughly dried. A gauze pad is placed on the wound and a layer of gauze-covered cotton completes the dressing, which is held in place by adhesive straps.

After Treatment

The after treatment, in the ordinary acute case without drainage, is a simple matter.

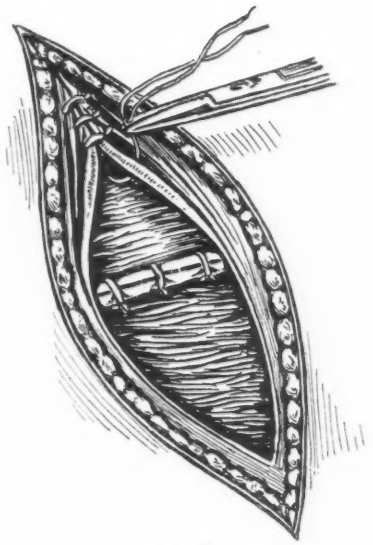

Fig. 11

As a routine, it is advisable to administer 1/6 grain of *lobeline*, hypodermically, immediately after the operation to avoid the undesirable postnarcotic vomiting and possible pulmonary complications.

The chief danger during the after treatment is that of peritonitis. To be safe, all cases should be treated for a few days as though the danger were imminent. The patient should be placed in the inclined trunk position. Nourishment should not be given by mouth for the first twenty-four hours, and the postoperative thirst sensation should be relieved by continuous rectal drip with plain tea or slightly hypotonic (0.6-percent) glucose solution.

In cases of uneventful postoperative course the metal clips or silk sutures can be removed the seventh day and the patients may sit up on the ninth day and walk about the tenth day.

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The Functions and Possibilities of the Office Girl

By MILES J. BREUER, M.A., M.D., F.A.C.P., Lincoln, Nebraska

EVERYONE knows the story of the three laborers, working side by side, one of whom, when asked what he was doing, replied, "Cutting stone"; a second said that he was earning five dollars a day; and a third stated that he was building a cathredral.

At first thought, one might say that a doctor's office girl should keep his books, answer the telephone, ask people to be seated when he is busy; and in the same vein I might say, draw her salary. Girls who can do that, and do it well, are plentiful and easy to get; if you lose one, do not worry, for you can easily get twenty more.

But, keep your eyes open for a girl who has a vision for some of the wider possibilities of her job. If you get one like that, train her in accordance with her capacity; take the time and trouble to make her see your side and the patient's side of her job. I know of girls who have been in doctor's offices for ten or fifteen years and who, during that time, have played a large part in building up their employers' businesses, as well as being indispensable to them in their work.

Accessories to Personality

When you reach the stage where patients will be compelled to come to you whether they want to or not, and when your handling of patients is on such an objectively standardized basis that you can always depend on your therapeutic results, then you can consider yourself independent of the assistance that an office girl of the proper personality can give you. But, under the present conditions of medical practice, you must attract patients to you in the face of competition. Your therapeutic results are uncertain; medicine is not an exact science. For getting new patients and keeping old ones you depend on your personality and its accessories, quite as much as you can do on your scientific training. Your office is one of the accessories of your personality, and your office girl is another very important one.

Medicine, as we have said, is not an exact science, and therapeutics is the less exact half of it. Our best therapeutists attest the truth of this by their methods, whether they are conscious of it or not; they depend quite as much upon psychological aids in their treatment as upon strictly scientific methods. If a patient comes to you in distress, mental or physical, and you are able to send him away much relieved, he is unable to distinguish how much of the relief was due to your personality and how much to your medicine. If his nervousness and his uneasiness have been soothed and his confidence restored by half an hour in a well-appointed office, in which a neat and pleasant-looking office girl has received him cheerfully and handled him tactfully, he will give credit for his improved state of feeling to the doctor's treatment.

Requirements of the Office Girl

Of the things that an office girl can do to be of the proper assistance, the first is to present an appropriate appearance. Personal good looks are more important in a doctor's office than anywhere else. This may, offhand, seem to make things difficult for the girl who is not naturally pretty, but only apparently so. Given good health, correct habits of living, and common sense in taking care of herself, practically every girl can look pretty enough to meet the requirements. Neatness in dress and hair, and a bright smile will effectively counterbalance any natural tendency to plainness of feature. A constantly pleasant facial expression, and a cheerful tone of voice will win more people than a beauty-prize face.

The girl must actually be interested in the patient whom she is receiving. Especially if he comes more than once or twice, she should know him by name, and recognize him as an old friend. We have all noticed how perfunctorily some of them say, "Be seated, please!" and how mechanically they ring for the doctor. How much better will the doctor's business grow if the girl can make the patient feel at his ease, and convey to him the idea that the doctor is already thinking of him and anxious to get to him. She should somehow convey the subtle impression that the whole thing is something more than a business matter. She can never accomplish this by play-acting; she must really feel that the patient has come to the right place and that the doctor is going to get him out of his troubles. And she must really be concerned in getting the

doctor's services for the waiting patient as speedily as possible.

Directly allied with the above is the help that a girl can give in arranging and caring for the office. A woman's hand can give a congenial touch to a waiting-room that a man's can never approach. This touch may mean the entire difference between keeping and losing people who are too restless to sit and wait. They will flee all the more quickly from a grim and forbidding waiting-room put together by a mere man, and the doctor may never see them again, for on their next effort they may have wandered into a waiting-room which had the proper touches to soothe their nervous haste.

At the Telephone

Answering the telephone may seem a simple matter, yet, in a doctor's office, it may sometimes become a very difficult thing; to do it successfully requires a girl with tact and presence of mind, and usually long training. For instance, I have gone driving around for a half hour looking for the house of a patient because the girl made a mistake in taking the name or the address over the telephone. People calling to a doctor's office are apt to become excited, and the excitement is apt to infect the office girl, resulting in mistakes and failure to get the proper information. As a result, the doctor may arrive at a confinement case without his kit, or at an accident without emergency dressings.

The situation is especially difficult when the doctor is busy at something and cannot come to the telephone at once. Yet, he would rather interrupt his work if the call is urgent than lose a good case. With the right amount of tact in her make-up, a girl can find out who the caller is and what he wants. Most doctors are pestered a good deal during the day by numerous telephone calls; an experienced girl can do a great deal to sort out these calls, take messages, and even arrange routine matters herself, and thus save the doctor a great deal of interruption. Constant interruption is very damaging to the kind of work a doctor has to do. The wrong way for her to go at it is to demand peremptorily from the caller: "Who is this?" Most people resent that, and in these days of keen competition it takes very little to scare them off into trying another doctor.

Especially, the telephone voice must be clear and cheerful. Some voices sound sullen, and others are all muddled. This can all be overcome by training. Personality carries over the telephone wire; and the telephone girl can inspire confidence in her physician-employer.

Here is another hint. When I am called to the telephone, and some young lady says, "Just a moment, please," and then leaves me hanging in suspense, not knowing why or wherefore, I am very much annoyed; and when I am busy, I do not wait. It impresses me as being rude. When you ask your office girl to get someone on the wire for you, see to it that she first makes sure you are ready to talk at once when she gets the party. Then have her courteously tell the party, "Dr. Blank wishes to talk to you. Here he is; can you wait just a moment?" That is plain courtesy; it will avoid riling up the other fellow's nerves, and give him a better impression of your office.

Receiving Patients

Also, it would seem that it is a simple matter to receive patients. All that is needed is to ask them to sit down, and then announce their presence to the doctor. Yet, to do this properly, without friction, without getting on anyone's nerves, requires a great deal of tact, study, and practice. To meet patients cheerfully and put them at their ease at once, so that they are content to wait, instead of fretting around impatiently, is an art. Some girls can do it, and some cannot; but most of them can learn it, if they cultivate it long and earnestly. This phase of the attention that the patient receives in your office is quite as important as his technical service; his treatment begins as soon as he enters the door. The impression of the first moment is the key which determines whether his worry and tension relax and confidence begins. The girl who receives him is the main feature of the impression of this first moment, and she can do much to make or spoil the doctor's whole undertaking.

The other half of the receiving job, that of announcing the patient to the doctor, is quite as important. Most of the time, the doctor is concentrating intently on the matter he has in hand, or is crowded, trying to do three or four things at a time; the sudden, rude announcement that "Mrs. Smith is in!" feels to him like a blow on the head with a club, and he would rather see Mrs. Smith in Gehenna at that particular moment. He is literally gasping for breath, and here comes, Mrs. Smith, the straw that

broke the camel's back. He groans. Yet, he knows, and the office girl knows, that Mrs. Smith must never find it out. Not the least hint of the doctor's desparate situation must the office girl convey to Mrs. Smith. The latter must be made to feel welcome, and given the impression that in just a moment the doctor will have nothing to do except to look after her pleasantly. Only thus can business be built up nowadays.

Helping the Doctor

But, as well as being amiable to Mrs. Smith, the office girl must be tactful to the doctor. His work is different from that of a soda-fountain clerk, whose main job is to hop around in a dozen directions at once; it requires concentration, clear thinking, and close attention. He is constantly solving difficult problems, and literally, at the same time, planning work ahead, like a chess-player. If, in the middle of this, the office girl is constantly breaking in and blurting out, "Mr. Jones wants to know how soon you can see him?", she is jamming the machinery which it is her duty to keep running smoothly. She is the go-between who sees to it that the patient gets prompt service and a fair deal, and who at the same time protects the doctor from having his work spoiled by needless and annoying interruptions, without at the same time letting the waiting patients get away. The doctor can neither afford to have his work ruined by constant interruptions nor to let patients get away because of their unwillingness to wait a half hour. This looks like a hard job for the office girl; and it is. It requires judgment and knowledge of human nature, and can be acquired only after study and experience.

While, as a rule, it is best for an office girl not to get into too intimate conversations with waiting patients, still there are times when she must talk to them. Opportunities for cleverly concealed salesmanship are numerous. A doctor cannot use ordinary salesmen and their methods, but he is justified in taking advantage of whatever psychology and human nature offer him. For the office girl to put in an enthusiastic remark now and then about her employer's ability, to assure doubting and hesitating newcomers in an unobtrusive way that he is competent to handle their troubles, is quite within her province, and is a therapeutic accessory of real value. It actually and concretely helps get patients well.

A Business Manager

Only some of the more prominent men and larger groups have a special bookkeeper and credit manager. Most of us have to get along with one or two girls to do all of our work, and we must train them ourselves. We have to be our own credit managers, and most of us are pretty poor at it. Yet, the office girl can learn to handle the credit end at least as well as you can; in many ways she can do it more efficiently than you. She can get acquainted with people and their circumstances, make decisions as to whom to trust, and how much to charge, and when and how hard to press debtors, and to look after collections. A girl can do this successfully, but not during the first week of her job, nor even during the first year.

The scientific end of a medical practice takes all the time and energy that one man can expend on it; he should be free from petty business worries so that he may better look after his patients' welfare and be a better doctor, thereby attracting more and better-paying patients.

I know a doctor whose office girl calls him down when he writes checks too freely. In other words, she watches his overhead. A doctor's office is a place where tremendous leaks are possible; what with instruments, drugs, fixtures, laundry, etc., a great deal of money can slip through the fingers carelessly. A girl can keep a better eye on this than the doctor can, and take care that useless and preventable expense is not incurred by the wasting of towels, dressings, stationery, etc., by looking carefully after perishable material, such as needles, glassware, etc. Keeping down overhead is an important part of the office girl's duties.

Advancement for the Office Girl

If she wants to work, and learn and advance, there is no limit to the possibilities of accomplishment. The following are some brief suggestions, indicating the direction which her advancement may take. They are all based on the principle that a doctor's work is highly skilled work; that the time he puts on unskilled work is time wasted so far as his progress is concerned. As far as possible he should avoid putting time on the doing of unskilled work, and put it on work for which he is especially fitted. No man ever achieved much success who put all his time on detail work. A clever young lady can learn to do a great

many things that will speed the doctor's work with his patients and save his time. Here are some of the things for which she can assume responsibility:

Keep his emergency and kit bags in order, cleaned, filled with supplies, ready for instant use.

Take down history and examination data while he is examining patients. If he does not have to do the writing, the examination takes but half the time that it otherwise would.

In histories and examinations, obtain from the patient those portions which do not require special skill, such as civil data, height, weight, pulse rate, temperature, blood-pressure, etc.

Do the simpler laboratory work. I have taken a number of young ladies who had never had any preparatory training, and made good technicians out of them, both for laboratory work and physiotherapy. It requires a little time and patience.

A girl can learn to do a good deal of watching and scheduling of the doctor's time, making and recording appointments and seeing to it that he keeps them; and even keeping an eye on his time as expended during the day and seeing to it that he gets paid for it.

The position of doctor's office girl is not an easy one. It is not even the best paid in the world. Doctors never make enough money to pay the salaries that some employers do. However, most doctors' office girls like their work. It is interesting, and is certainly not monotonous. There is a consciousness that one is helping to do good among people, and a satisfaction in being essential toward helping a good work go forward, and in being indispensably essential in whatever success the doctor does achieve.

201 Security Mutual Bldg.

The Management of Hay-Fever and Asthma

By H. O. STROSNIDER, M.D., St. Francisville, Mo.

IT HAS been by custom, ever since I have been in the practice of medicine, to make a study of all the diseases that were difficult to handle.

I had been in practice only a short time when hay-fever and asthma patients began coming to me for treatment, and they all told the same story; that they had taken treatment from various physicians, but were unable to find anyone who could do them very much good, and none who would ever talk about a cure.

In a case of true asthma, we find a patient who develops sudden paroxysms of dyspnea, expiration being always more difficult and longer than inspiration, with a wheezing as the air is forced out of the lungs.

Diagnosis

Asthma is only a symptom and not a disease, and when the actual paroxysm is sufficiently understood, it will enable anyone to recognize the asthmatic syndrome without much difficulty.

The point that will indicate that the dyspnea is true asthma is the spasmodic nature of the complaint, with the periodic return of the spasms at regular time intervals in the day or night, returning to normal during the intervals.

The sputum will show eosinophilia, Charcot-Leyden crystals, and Curschmann's spirals.

I have seen true cases of asthma, the same as you will find in human beings, in the horse, dog, cat, chicken, and hog.

Anaphylaxis

Every species of animal; every kind of tree or vegetable; bacteria or parasite has its own specific protein.

In 1902 Charles Richet injected a protein into a dog for several days, expecting to form antibodies in the dog, and an immunity against the protein poison. The first injections were given without harmful effects. In 20 days he injected the same protein into the same dog in the same sized dose, and, to his surprise, he had hardly finished the injection when the dog became very ill and died in 25 minutes. Instead of producing prophylaxis in the dog, he had apparently produced the opposite condition, so he gave it the name "anaphylaxis."

This work led to the discovery that asthma and hay-fever are probably mild forms of anaphylaxis, due to protein sensitization.

If, in animal or man, an injection of some foreign protein be given and an incubation

period of 10 days or more be allowed to elapse before the second injection is given, it may give rise to profound symptoms which may lead to the death of the animal or man in a few minutes.

The typical picture of anaphylaxis is as follows: After the second, or exciting dose, of a foreign protein, the animal or man becomes restless; an irritation of the nose, chin, or chest will cause scratching; respiration is quickened and difficult; vomiting may take place; there may be diarrhea, with passage of blood; tetanic spasms often take place, with paralysis and collapse.

One important point is that a bronchial spasm in the lungs of an animal can be produced if the lung of a sensitized animal is removed from its body and washed free of blood; then if an injection of the original protein is given in the lungs, a spasm of the lungs will take place, and air can neither be forced into or out of them.*

If a horse is fed only clover hay for a time, and is then put out on green pasture, he may become sensitive to clover, and, the first time he is again put on this hay as a feed, he will get what the farmers call "heaves," which is asthma in the horse, and is due to the protein in the clover hay.

Illustrative Cases

I.—Last year I had under treatment an asthmatic who had had pneumonia in 1922, and in 1923. After which he became sensitive to the pneumococcus and streptococcus, and when he recovered from the latter attack of pneumonia, he had asthma so severely that he was unable to work at his trade. When he came to me, his sputum still contained the pneumococcus and streptococcus.

II.—A cattle man, whom I have had under treatment for a number of years, is always wheezing when he is around animals. He is sensitive to cow hair and is always attacked by asthma for a few days after he gets back from a trip on a stock train.

III.—Two years ago I treated a child who was sensitive to the protein of milk. It had urticaria and wheezing whenever milk was fed. There was difficulty in bringing it to an age where milk could be eliminated from the diet.

IV.—A lady who had asthma very severely was found to be sensitive to dog and horse hair. Her asthma was always worse when she was in the vicinity of a horse or dog.

V.—I had under treatment, two years ago, a man whose blood showed the plasmodia of malaria. I had been giving quinine intravenously to my malaria patients for a long time, which always cleared the parasites promptly. I gave this man a small intravenous injection, and before I got through with it I found he was sensitive to quinine, and a typical case of anaphylaxis developed. I am sure that, if I had not given him a large injection of adrenalin at once, he would have died in my office.

VI.—I treated a farmer who was sensitive to corn fodder. He had to stay out of the corn field, and get some one to shuck his corn. He had asthma very severely every night, and I found that he was sleeping on a corn-shuck mattress, which appeared to be the cause of his asthma.

Anaphylaxis and Fatigue Intoxication

In 1923, Doctor Ochsner made an exhaustive study, and wrote a treatise on a disease which he called chronic fatigue intoxication. The more I read what he wrote regarding this disease, the more I think that he had cases of protein sensitization.

His theory was that the disease was due, in part, to a heavy protein diet, and the early symptoms to appear were urticaria, pruritus and eczema—just what you will find in cases of asthma and hay-fever. His treatment was a protein-free diet until the patient was relieved of the fatigue intoxication. I have had such cases as he reported, and I found that they were sensitive to some protein in their diet, or to the protein of some bacteria that they had in their system. Instead of the patients forming antibodies in the blood against the protein or bacteria, they formed a specific substance which seems to produce asthma in one patient and fatigue intoxication in another.

Treatment

I believe that every patient with hay-fever or asthma can be cured, or put in such a condition that he can go from year to year with very little treatment, and have very few and mild symptoms.

No doctor should ever take a case of this kind unless the patient is willing to be under his care for months. One might discover the cause of the patient's asthma at the first visit; or, it might take months to find the real cause, and to be able to remove it.

Protein Sensitization Tests

The first thing to do if you are going to undertake to treat hay-fever or asthma

*Coke, Frank, *Asthma*—Wm. Wood & Co., 1923., p. 30.

is to procure a complete set of proteins for testing sensitization, which will cover all kinds of proteins in foods, animal hair, bacteria, feathers, and pollens. These are used to find the dermal reactions. When the test is made, every mild as well as severe reaction must be noted as a reaction. You will find that the mild reactions will frequently point to the offending protein. If a patient gives a severe reaction to some food that he eats about once a year, and has asthma every night, you will know that something else is the cause of his asthma.

A description of the technic of the dermal tests will come with the set of proteins you get for testing. In normal cases the reaction will appear in about 15 minutes after protein is applied, but some reactions are delayed and appear after from 4 to 5 hours. You should number the skin tests, with ink or pencil, so the patient can tell you the ones that give the delayed reactions.

The first proteins to be used in testing should be the kinds of food that the patient eats every day; and any food to which the patient gives a reaction must be dropped from his diet. The commonest articles to which we find sensitiveness are eggs, milk, potatoes, wheat flour and meat. Eggs are the most difficult to avoid, as they are used in so many things that a patient eats; and some patients are so sensitive to them that they are unable to eat buns glazed with egg-whites.

After the patient has abstained for some time from the food to which he is sensitive, he can be desensitized by giving very small doses of that food each day, gradually increasing and trying to build up a tolerance.

The next tests will be all kinds of animal hair. If you find the patient is sensitive to any kind of animal hair, he must stay away from that animal and never go into a house or barn where these animals are kept. It is difficult for farmers to stay away from horses and cows.

The next test will be made for feathers. If you find the patient is sensitive to any kind of feathers, he must avoid them and not sleep on feather beds nor have any feather pillows around the house.

Pollen Proteins

The tests for pollens which are the cause of hay-fever and asthma will take in all the pollens from grasses, shrubs and trees; and those who are sensitive to any one of the pollens are more or less sensitive to all the rest of the plants in the same family.

The principal pollens involved in this country will fall into four groups: No. 1, the *Gramineæ* group, which takes in all the grasses; No. 2, the *Chenopodiaceæ* group, which includes all the thistle family; No. 3, the *Ambrosiaceæ*, or the family of the rag weeds; No. 4, *Artemisia*, or the worm-wood family (sage brush). You have only to use the test with those four groups of pollen extracts, and when you find the group to which the patient is sensitive, that is the group you must try to desensitize him against.

Remember your patient is *sensitive* to the pollen you are going to use, and unless, in the beginning, you give him the pollen extract in doses so small that you will never get a reaction you can never desensitize him. The doses should be given at regular intervals, gradually increasing, to build up the resistance of the patient. Procure a guide and table for administering the pollen extract and study it before you start your treatment.

Bacterial Vaccines

Bacteria are simple forms of vegetable life, and have their own specific proteins, which are the cause of many cases of asthma. If a patient is sensitive to bacteria and there is evidence of a coccal infection, make a search for signs of external suppuration—pyorrhea, otorrhea, or leucorrhea—and if none are found suspect internal inflammation—appendicitis, chronic bronchitis, pleurisy or pelvic suppuration, in the female.

In the infected cases you may need the aid of a dentist or a surgeon before you put them under treatment.

The greatest benefit, in bronchial asthma, by the use of vaccines, has been with autogenous vaccines, made from the patient's own sputum. The first dose must be very small to try the patient out, as they may be sensitive to the bacteria in the vaccine.

The practice of assuming that asthma is always due to the same bacteria and giving a stock of vaccine is not only harmful but will bring discredit on that branch of therapeutics. Vaccine is a friend in need, but thoughtless and indiscriminate giving of vaccine is apt to bring disaster, as vaccines are two-edged weapons.

There is one variety of asthma which is due to intestinal infection, and to a number of kinds of bacteria. When you are unable to find any other treatment that will help the asthma patient, have a mixed vaccine made from all the organisms found growing

in the patient's intestinal canal. Give the patient a daily "clean out," and intestinal antiseptic treatment.

I have had some asthma patients who did well on intravenous injections of calcium or sodium iodide, and they have all been cases with some form of infection. Calcium chloride and parathyroid extract, by mouth, seem to benefit some patients.

Nose and Throat Conditions

The correction of abnormalities in the nose and throat is the work of rhinolaryngologists, and none but an expert should attempt this work. You may find polypi, septic sinuses, adenoids and septic tonsils or a boggy condition of the mucous membrane covering an ethmoiditis, with pus and dead bone behind in the cells. These must all be looked after if you want to do the asthma patient any good.

General Factors

I find that, in all asthma and hay-fever patients, there is an acidosis and, unless you elimnate the toxins and correct the acidosis by keeping the patient's system in a neutral or slightly alkaline condition, you will not do the patient the good you should do.

Most cases of asthma are "run down" and have a low blood count. A few intravenous injections of iron and arsenic will raise the blood count and the resistance to bacterial invasion.

For the treatment of asthmatic paroxysms we have adrenalin which is a stimulant to the sympathetic, and has an antagonizing action on the pneumogastric, which makes it practically a specific against the asthmatic paroxysm. It must be given in small doses, hypodermically, and can be given several times a day, but never in large enough doses to cause headache.

I stopped giving morphine to asthma patients several years ago. I found that some of the chronic patients had taken morphine so long that they did not care to give it up even if they were cured of their asthma.

As for a change of locality with an asthma patient, I have found that some do well in one place, and some in another. A lady who went to Colorado for the relief of asthma was there two years. She had hay-fever and asthma so severely that she had to leave the state. She came to southern Iowa and never had hay-fever or asthma again.

Psoriasis

By HERMAN GOODMAN, B.S., M.D., New York City

HISTORY

THE history of psoriasis is obscured by the variety of names by which the disease was presumably known. Lepra, alphos, lichen (a tetter-like eruption) and psora (itch) were, in ancient times, applied to diseases which are claimed to be identical with psoriasis as we know it today.

Aurelius Cornelius Celsus (53 B. C.—7 A. D.) considered psoriasis as a species of impetigo. He confused a form of vitiligo, which he named alphos, with psoriasis. The name of Celsus comes to us in association with *area Celsi*, or alopecia areata.

The Arabian medical authorities classified psoriasis with lichen, psora, and leprosy under the heading of usagro, which practically covers the impetigo group.

Robert Willan (1757-1812) extricated the psoriasis of today from the heterogeneous groups in which it had been placed. He used the name psoriasis for the scaly disease. Psoriasis had been used as far back as Hippocratic times to designate a disease of the eyelids associated with scaling, itching, and excoriation.

German and French authors have followed Willan. Psoriasis has definitely been divorced from the dreaded leprosy.

The recent history of psoriasis has concerned itself with the etiology rather than with its classification. Norman Walker does not see, in psoriasis, a disease entity but a dry form of seborrhea. There seems much to be said for this concept, but it is not generally accepted.

ETIOLOGY

The cause of psoriasis is not known. Actually, no hint of its etiology has stood the test of broad experience. The entire range of possibilities has been covered and arguments for and against the various theories would occupy us many hours. In brief, the ideas have been:

1.—*Parasitic theory.* From clinical viewpoints the possibility that a fungus causes psoriasis seems not unlikely, but to date no form of vegetable parasite has been dis-

closed which can be considered as the causative agent. Lang thought that a certain predisposition on the part of the individual was necessary before the unknown fungi could operate. Unna considered the morococcus responsible. Recently a monillia has been advanced as the cause of psoriasis. Animal experiments to induce a disease of the skin similar to psoriasis have always failed. The possible parasitic factor for psoriasis is emphasized by familial cases; by first appearance of psoriasis after tatooing; and by apparent transfer from mate to mate.

2.—*Diathetic theory.* Bazin suggested that psoriasis belonged to the constitutional diseases, allied to the arthritic or herpetic group (in the sense of herpes tonsurans). Hardy and Hillaire would group psoriasis with an unknown causation as dartrous diathesis. Autointoxication has been called upon to explain psoriasis' etiology, especially by Gaucher. Tommasoli would have us classify psoriasis as a keratodermid, the same being chronic dermatoses following disturbances in nutrition. Dr. L. Duncan Bulkley advanced the idea that an excess of nitrogenous intake (retention) was responsible for psoriasis. More recent laboratory studies have confirmed the clinical observation.

3.—*Neuropathic theory.* Weyl advanced the idea that psoriasis was due to a weakness in functional activity of the nerves controlling the nourishment of the skin. Tillbury Fox, too, thought that the trophic nerves were important. Chronic irritation of the spinal cord has had a vogue to explain psoriasis. The relation between an outbreak of psoriasis and a nervous period of the individual has been advanced as proving psoriasis a disease of the nervous system. Of course, syphilis of the nervous system has been called upon to explain psoriasis.

4.—*Disposition theory, of Koebner.* Koebner, for whom the eponym, *Epidermolysis bullosa hereditaria*, has been given, utilizing the clinical experience that, if the skin of a psoriatic is irritated by a wound, for example, psoriasis appears there, believed that the individual had a disposition to psoriasis. This disposition, he believed, was an hereditary one.

5.—*Hereditary theory.* The familial distribution of psoriasis has led, of course, to the suggestion that it is an inherited disease. Certain authorities claim that, in every case of psoriasis, the disease can be demonstrated in the parents or at least in the closer relations. Erasmus Wilson, Rosenthal and Payne as well as Abraham published their findings on familial distribution, and claim from 16 to 30 percent of the patients show it.

6.—*Endocrines.* Strange as it may seem, no definite stride has been made toward claiming psoriasis as an endocrine disorder, other than a suggestion of hypothyroid influence.

7.—*Vascular.* Brooke suggested vessel changes as etiologic.

Shakespeare, we are taught, utilized every possible form of dramatic plot in his plays. No situation occurs in any work since his time but what might be classed as plagiarism. Psoriasis, to this day and age, is not unlike Shakespeare. Every possible etiologic connection has been brought into the light but some link has always failed. I close as I began: the cause of psoriasis is not known.

ANATOMIC PATHOLOGY

Three features are essential to the pathology of psoriasis. These are: parakeratosis; epithelial overgrowth; and vascular dilatation. In the earliest clinical lesions of psoriasis, one finds the sections showing an edema of the transitional layers near the horny layer. The papillae show edema even before the scale has formed to any degree.

In fresh, rapidly-developing papules, one finds collections of round, wandering cells in the underlying rete and papillary layers. According to Munro, the primary lesion of psoriasis is expressed by those miliary abscesses, known as Munro's abscesses. In response to the presence of these, the horny layers hypertrophy, carrying the small abscesses to the surface. The leucocytes disintegrate, and lose their protoplasm. The nuclei are left. This finding is not constant.

The horny layer is thickened. Individual lamellae are present with stained nuclei. Where there is no keratohyalin, the number of stained nuclei in the horny layers is greatest. In the presence of keratohyalin, no such collections of nuclei exist. From this statement it is evident that there may be a complete, or incomplete disappearance of the keratohyalin, and of the eleidin. Air fissures are present in the horny layers, which is supposed to be the explanation for the silvery or mica-like appearance of the clinical scale.

The prickle cell layers are increased so that papillae are enlarged into the cutis. The layers over the tips of the papillae are

thickened only if the normal horny layer is present. If the white scales are present, the suprapapillary zone is not thickened. Clubbing of the papillae is found. The intercellular bridge spaces are broadened.

Wandering cells are found in the malphigian layers. In the lower levels, the wandering cells are single, but in the upper rows these cells are found in groups.

Numerous mitoses are to be seen, mainly over the basal cell layer, or in it. Jamieson found cells with as many as three nuclei in the hyperplastic rete prolongations.

The papillary bodies are edematous. The papillae appear elongated to many times normal size. The vessels are increased in length, and in thickness, are much longer in proportion to the length of the papillary body, and are coiled, looped, twisted, duplicated, etc., showing the extraordinary change. According to Unna, it is the venous side of the capillary network which is thus changed. The arterial tree is held to be normal.

A cellular infiltration is noted in the papillary body which may be limited, or extend to the entire vascular zone of the derma. The infiltration about the coil glands and sebaceous glands is meager. Mast cells may be found.

Although the study of the stained sections is interesting and helpful to a degree, it does not seem possible to glean more from this type of investigation than a microscopic translation of a macroscopic picture. The biopathology cannot be determined by this method.

CLINICAL PSORIASIS

Psoriasis is a common disease of the skin. It ranks in the first five of practically all lists of occurrence of dermatoses.

The eruption of psoriasis is a variable one. The primary lesion is more or less definite. It consists of a tiny round or oval patch, either level with the surrounding skin or slightly elevated, with an abundant scale. The scale is adherent to the underlying macule or papule (most often the later), which is ordinarily bright red in color, but may be darker or lighter, depending on its location. The scale does not quite cover the underlying primary lesion, so that a rim of erythema may be seen.

Psoriasis, it is agreed, has sites of predilection. The extensor surfaces of the body, especially the skin about the knees and elbows, and the scalp are prone to show the lesions of psoriasis. The eruption is roughly symmetrical. The disease is a chronic one. It appears in childhood (exceptionally in infancy) and persists through life, sometimes with varying periods of remission which come in summer or spring. It does sometimes happen that the disease declines entirely or that the recurrences are so mild as not to be noted.

Psoriasis may appear for the first time at any age, although one hesitates to make a diagnosis of psoriasis in advanced adult life without a history of former attacks.

The lesions of psoriasis all begin as small spots. If the eruption is predominantly of the small punctate variety we speak of punctate psoriasis. Should the size of the spots, and their appearance of simulating dry mortar flaked on the skin warrant it, one speaks of guttate psoriasis. When the lesions are larger still, and approach coin size, they are known as nummular psoriasis lesions. If tremendous areas of skin surface are involved to give a fancied resemblance to map drawings, we have geographic psoriasis. The involvement of the entire body earns the appellation of universal psoriasis. If the scaling is an especial element of the eruption, and the scales are heaped up prominently, we have rupioid psoriasis. The lesions of psoriasis appear in lines, sometimes along a nerve, and then are given the name of linear psoriasis. All the above is, of course, artificial. Psoriasis is psoriasis at all times.

The Scale

The scales, which are the striking features of the eruption, are actually incidental. They are readily removed and in fact are continually shedding so that the clothes next to the body are filled with them. They are easily removed by scraping.

If a scale is carefully removed a delicate glistening membrane is exposed. Under this pellicle, one finds minute bleeding puncta at the spacing of the papillary bodies. The scale is silvery white or mother-of-pearl color, or may be grayish and is practically always dry and mica-like. The appearance of the scale is supposed to be due to inclusion of air. The amount of scale present at any one time is variable. Cleanly persons show less scaling by reason of the daily bath. Perspiration, as it occurs in summer, seems to result in less scale. If the part be tightly covered, the scale is not so marked.

Location of Lesions

Psoriasis limited to the hairy scalp is difficult of recognition. Patches elsewhere

must be sought to make the diagnosis certain. If, as is most often the case, the area of skin next to the hair-line on the forehead is affected, the diagnosis is made more easy, especially if the lower line of demarcation is a sharp one. According to some authors, the strip of skin against the hair-line in front gives as pathognomonic a picture of psoriasis as can be found. This is not universally accepted. The front of the ears may also show typical lesions of psoriasis associated with lesions of the scalp. The scalp may show patchy involvement or the entire scalp may be affected in a sheet-like eruption. There is no tendency to loss of hair although the hair may be lusterless. It is unusual for the face to show lesions.

It is debatable whether psoriasis, as such, affects the mucous membranes. Cases have been reported under this designation. It is more certain that psoriasis does affect the muco-cutaneous junctions. The mucous surface of the prepuce may be affected in psoriasis of the genitalia.

The hands and feet are less often involved in psoriasis than other parts but in a generalized psoriatic eruption these parts may also show the process.

The nails may show the effect of psoriasis. They become opaque and pitting, furrowing and discoloration are present. The nail may be raised by the accumulation of debris beneath it. Ordinarily, one or a few nails are affected at a time, and rarely does one find all the nails showing the process at once. I am in accord with others who find that diagnosis of the nail lesions alone is difficult.

Other Features

Itching is a variable symptom. Some people give evidence of pruritus; others do not. The latter is most often the case.

Except for an association with arthritis, in the socalled arthropathic psoriasis of the older writers, psoriasis has been held for a long time to be a disease of healthy people.

Pigmentation or depigmentation may follow the disappearance of the psoriatic lesions. What part the therapy plays in the color change has not been decided.

Patches of inveterate psoriasis,—single patches which are in themselves difficult to eradicate—have been reported as becoming epitheliomatous. Whether the treatment or the disease or the combination is responsible remains unknown. It is worthy of noting that the negro is less subject to psoriasis than white persons; also that in the tropics one finds psoriasis very infrequently.

Differential Diagnosis

The differential diagnosis of psoriasis is made from the other members of the papular squamous group. Some of the more important ones follow.

Syphilis

The *papular syphilides* all have a tendency to scaling, and occasionally the scaling becomes the more important feature of the clinical appearance of the large papular lesions. The pure squamous variety, which is scaly from the very first, is rare. The papulosquamous syphilides consist of rounded or ringed lesions of dull red color covered by dry friable scales. The latter are less adherent and less abundant than those of psoriasis and the silvery luster of the scales of psoriasis is absent. Scraping the scales of the papulosquamous syphilide with the edge of a pointed applicator (avoid using the finger nail for obvious reasons) does not reveal the bleeding points of Auspitz. The papular element of the lesion is infiltrated.

The eruption appears on the face, neck, back and on the flexor rather than the extensor surfaces of the extremities, but not universally so. The points of the elbows and knees and the scalp are ordinarily free. The eruption otherwise may be widely distributed, either with abundant lesions or with few lesions. Even if abundant, there is a tendency for the lesions to remain discrete, but gyrate and festooned figures may be formed from lesions which are close to each other. Nonscaly papules may be present among the scaly ones. The papulosquamous syphilide may appear as a general eruption of the secondary period (rare) or it may follow the persistent papular syphilide, being a rather late manifestation of generalization. The eruption may be more or less persistent, but yields to treatment leaving somewhat pigmented areas. Recurrence may be noted. Except in the negro, for whom the papular syphilide in general seems to cause the complaint of pruritus, there are no subjective symptoms.

The concomitant features of secondary syphilis, as adenopathy, mucous membrane lesions, falling of the hair in patches, general malaise, and others should be sought for, and properly evaluated. The search for spirocheta pallida and the Wassermann reaction, as well as the therapeutic test, may be called upon to differentiate syphilis.

Seborrhea

Seborrhea and seborrheic dermatitis are listed as simulating psoriasis. When limited to the scalp, I found it difficult to distinguish psoriasis from either of these, but, fortunately for clinical differential diagnosis, lesions on the glabrous skin are easier to separate. Since we hesitate to make two diagnoses on the one patient, if the body lesions accompanying a scaly scalp are those of psoriasis, it is accepted that the scalp lesion is likewise psoriasis. On the other hand, a scalp which may look enough like psoriasis when seen as a scalp lesion alone, is accepted as seborrhea if the body lesions which are also present are those of clinical seborrheic dermatitis.

In psoriasis, it has been said that the lesions extend beyond the hairy scalp and in seborrhea this is held not to be so. I have already mentioned that this cannot be accepted at full face value.

The scales of seborrhea and seborrheic dermatitis are not silvery white; they are not so dry; and the lesions rarely clear in the center. On the contrary, seborrheic scales are yellowish, oily and greasy, and the underlying lesion is not perceptibly raised above the level of the surrounding skin. The sequence of events enumerated as following careful removal of the scale does not follow on removing a scale from a seborrheic lesion. The extensor surfaces, are not ordinarily the sites of seborrheic dermatitis, whereas the flexor surfaces, comparatively free in psoriasis, are the sites of predilection. Dependence on localization should not be complete.

Eczema

Squamous eczema may be mistaken for psoriasis, especially if the lesions are present on the scalp. Certain features should make the distinction possible on clinical grounds. The borders of a patch of eczema usually merge with the surrounding skin. The presence of moisture rules out psoriasis. The scale in squamous eczema is attached to the underlying skin differently than the psoriatic scale; no bleeding point on removal of the scale and pellicle are found. The scale is not so white; covers the lesion completely; and is moist on its under surface. The sites of psoriasis may be the sites of squamous eczema; the scalp and nails may share in the process of eczema.

The variety of eczema which has gained the name of *lichen simplex*, neurodermite, or lichenified eczema (I am grouping these three for convenience only) may bear a striking resemblance to psoriasis at times. The scales are not so clear-cut as in psoriasis; they are not so friable; and the sequence of events following the careful removal of the psoriatic scale does not appear on removing the scale of this type of lesion. Ordinarily the back of the neck, and the flexors of the joints are symmetrically involved in lichenified eczema. Pruritus is a common complaint.

Senile Changes

In old persons and in the debilitated, the regions about the elbows and knees may show a slight scaling which simulates psoriasis to a minor degree. Examination of the scale does not disclose the typical appearance of psoriasis. The lesions are decidedly itchy. I have come to believe that, by and large, the involvement of the actual tip of the elbow and knee is not so good a diagnostic point for psoriasis as it has been held to be.

Ichthyosis and Lichen

Mild localized *ichthyosis* is found at the elbows and knees as part of a generalized ichthyosis, but neither should be confounded with psoriasis.

Lichen planus may be mistaken for psoriasis although clinical difficulty is rarely encountered if either eruption is at all typical. The papules of lichen planus are much smaller than those of the psoriatic eruption; the scale is not nearly so marked; and the positive symptoms of lichen planus, as, the stria of Wickham, the umbilication, the violaceous hue, the polygonal, flat-topped lesions should serve as distinguishing marks. Lichen planus is pruritic, and lesions may be found on the mucous membranes.

Isolated lesions of hypertrophic lichen planus may not be easy to differentiate on purely clinical grounds, but the sparsity of the eruption, the evident infiltration, the subjective symptoms, and lesions at the border may be of help.

Tinea and Favus

Tinea circinata, distributed over the glabrous skin, may suggest psoriasis at first glance. Examination of the vesicopapules at the borders of the lesions will disclose the causative organisms.

Tinea of the scalp shows the broken off hairs and the associated organisms.

Favus of the scalp shows the yellow, cup-shaped lesions, and the causative organisms. Late favus shows evidence of scarring and baldness.

The presence of baldness and scarring definitely excludes psoriasis from all diseases such as erythematous lupus, gumma, folliculitis decalvans, and ulerythema from consideration. In the differential diagnosis of psoriasis of the hairy parts, more particularly the scalp, psoriasis does not lead to baldness and scarring.

Keratosis and Pityriasis

Keratosis pilaris is a papular disease with some tendency to show scaling, but the latter is a minor feature of the disease. The papules are grayish, pointed, grater-like. They are most pronounced and often limited to the thighs and upper arms but are rarely found on the trunk. The eruption may be pruritic.

Pityriasis rubra pilaris is a scaly papular disease with especial tendency to affect the follicles. The lesions of the first phalanges are typical, and almost diagnostic. The keratoses of the palms as part of the clinical picture may be confusing, but actual psoriasis-appearing lesions rarely come in *pityriasis rubra pilaris.*

(*To Be Concluded in the June Issue.*)

Michigan's Medical Center

By GEORGE B. LAKE, M.D., Chicago

BENJAMIN FRANKLIN once made a pregnant statement to the effect that those inventions which tend to abridge distance had done more for the advancement of civilization than almost any others. We, of today, are seeing, to an extent he never even imagined, the changes which are being made in the world of our activities by our vastly increased transportation facilities; and in the field of medical education the change is as marked as it is anywhere.

Even so recently as twenty-five years ago some of our wisest men declared that it would never be possible to develop a great medical center in a small community, because of the lack of clinical material. The development of transportation has changed all that, and the rise and progress of the Mayo Clinic in the little town of Rochester, Minnesota, and, more recently, of the great University Medical Center, in the small city of Ann Arbor, Michigan, are eloquent signs of the new times.

The first steps toward the establishment of a Faculty of Medicine and Surgery at the University of Michigan were taken in 1847, but the formal opening of the medical building and the inauguration of the new Department did not take place until 1850. In that year there were 90 matriculates in Medicine and 64 in the Literary Department of the University which now numbers over 14,000 students, all told.

The vigorous growth of the new Department proved that the time was ripe for the establishment of a strong medical school in the Midwest.

In those days the entrance requirements were very simple: a fair high school education, with enough Latin and Greek for the understanding of medical terms. For graduation one must have "read medicine" with a reputable physician for three years, in addition to (or including) the two six-months courses of lectures which then comprised the work of the Department. One must also prepare and present a graduation thesis, and it is reported that some of the earlier theses were written and read in Latin!

In 1877 the annual courses of lectures were lengthened to nine months each. In 1880 another year was added to the course. In 1890 the course was increased to four years, of nine months each, and the entrance requirements made the same as those of the classical and scientific courses, with an optional combination course which gave the student his literary and medical degrees at the end of six years. In 1914 this combined course was made compulsory.

The first faculty consisted of six men: Dr. Abram Sager, Professor of Obstetrics and Diseases of Women and Children and Dean of the Faculty; Dr. Douglas, Professor of Chemistry, Pharmacy and Medical Jurisprudence; Dr. Moses Gunn, Professor of Anatomy and Surgery; Dr. Samuel Denton, Professor of Pathology and Theory and Practice of Medicine; Dr. J. James Allen, Professor of Therapeutics, Materia Medica and Physiology; and Dr. R. C. Kedzie, Demonstrator of Anatomy.

Dr. Gunn and Dr. Zina Pitcher, of Detroit, a member of the first Board of Regents, were the real founders of the Medical Department of the University.

During the years that have passed the roster of the faculty at Ann Arbor has shown such great names as Albert B. Prescott (Chemistry), Victor C. Vaughan

The Old Medical Building. (1850-1914.)

(Physiology, Pathology and Hygiene), J. Playfair McMurrich (Anatomy), G. Carl Huber (Histology), George E. Frothingham (Ophthalmology), George Dock (Practice of Medicine), F. G. Novy (Bacteriology), Arthur R. Cushny (Pharmacology), Aldred S. Warthin (Pathology) and many others.

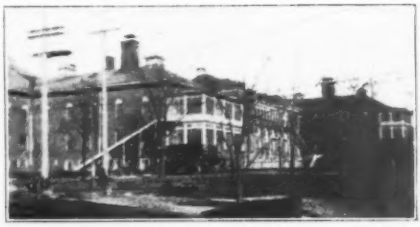
In the early days instruction was almost wholly by lectures and quizzes, but gradually one laboratory after another was established. Clinical teaching also developed slowly and there was a time when the authorities, feeling that the clinical material in Ann Arbor was insufficient, established a school for such instruction in Detroit.

The Medicinal Department developed so fast that it rapidly outgrew its facilities. In 1864 an addition was made to the original medical building. In 1868 the house of one of the professors was fitted up as the first University Hospital. In 1903 a "new" medical building was completed, and the old building with its classical, Corinthian columns, for so many years a landmark on the campus, was torn down in 1914. Within the last year a still newer and finer medical building has been opened and the one which was "new" a few years ago, is now the "old."

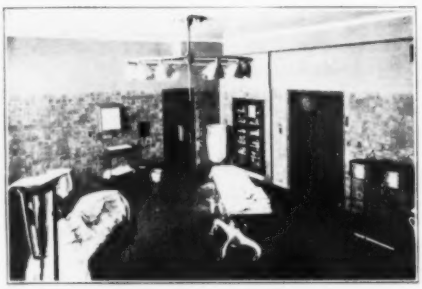
This "newest" medical building embodies every latest idea in laboratory construction and arrangement. The anatomical laboratory is equipped with terrazzo-topped tables, each furnished with a sink and running water and the bodies are cared for, prepared and handled according to the most modern practice; the chemical, bacteriological and other labaratories have gas, electricity, hot and cold running water and positive and negative pressure always available; up-to-date animal houses are located in the top story, with open runways on the roof.

The clinical material at the University has been growing steadily from year to year, but especially in the last fifteen or twenty years. The elaborate and commodious hospitals (for that day), which were built at some distance from the campus, at or shortly before the beginning of this century, were outgrown. The homeopathic hospital, which was built near the campus about 1905, was needed for other purposes when that department was discontinued. The development of the automobile brought more and more patients to the Medical Center, whose fame was rapidly spreading, so that, even before the War, the facilities were severely taxed, but new construction had to wait upon the Nation's necessity.

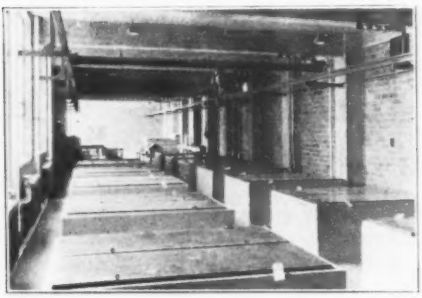
The Psychiatric Hospital.



The "Old Hospital." Tuberculosis and Obstetric Wards.



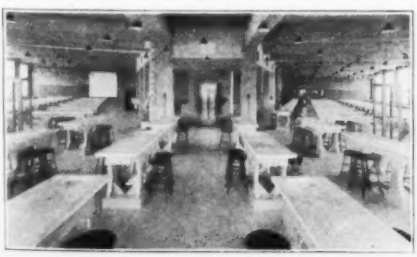
One of the Operating Rooms.



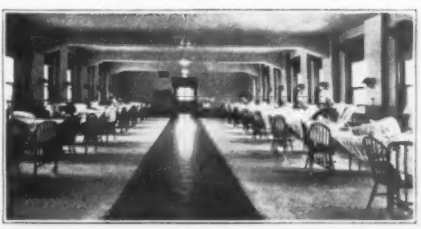
Storage Room for Anatomical Material.

Laboratory of Bacteriology.

The James Couzens Nurses Home.



The Anatomical Laboratory.



A Typical Ward.

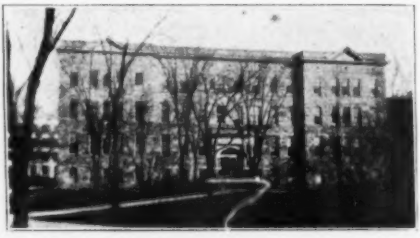
In November, 1925, the New University Hospital, situated on the hills overlooking the Huron River, was formally dedicated. This building, which is one of the finest of the kind in this country, has ten acres of floor space; two miles of corridors; 2,700 windows; and cost $3,400,000.00, exclusive of the equpiment, for which $400,000.00 more was paid.

This new building will accommodate 700 patients, arranged as follows: Twenty wards of 18 beds each (360 patients); four wards for children, with 36 beds each (144 patients); 92 private rooms, twelve of which have private baths; and 52 semi-private rooms of two beds each. For each bed there is a floor area of 410 square feet, with 5,403 cubic feet of space.

The old hospital buildings, with a capacity of 450 beds, are now used to care for psychiatric, tuberculous and obstetrical patients. With a total capacity of 1,150 beds this is one of the largest clinical centers in the country.

The service arrangements—kitchens, dining rooms, boiler rooms, linen, sterilizing and patients' clothing rooms—are of the most modern type. The nurses and all employees are fed by the cafeteria system. All dressings are sterilized in the basement. All baking is done on the premises, in electric ovens.

There are eleven operating rooms, located on one corridor and all facing north. On the south side of this corridor are two pairs of anesthetic rooms, equipped with every modern device and convenience, as well as scrub-up rooms, instrument rooms and all the other accessories of an up-to-date operating pavilion.



The "New" Medical Building. (Opened 1903.)

There is no great operating amphitheater, as the futility of this arrangement is now well recognized, but four of the operating rooms have clinical balconies which will accommodate 15 to 18 men each. Two are furnished with heavy, electrically-operated curtains, running between double windows, so that the rooms may readily be darkened for ear, nose and throat operations. All have compressed-air and vacuum connections and an accessory lighting system, for emergencies, and all are finished in moss-green tile.

Here is to be found one of the largest hare-lip clinics in the United States, averaging about 100 patients per year, many of whom require several operations.

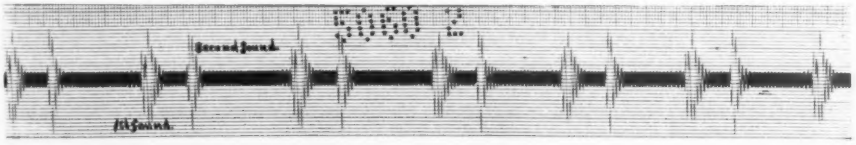
The New University Hospital.

The "Newest" Medical Building. (Opened 1926.)

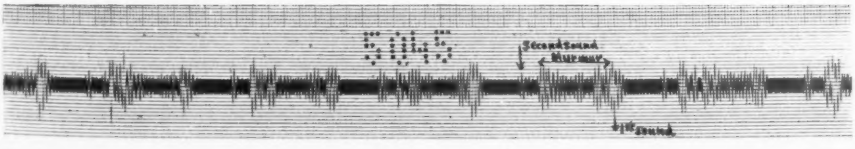
The heart station surpasses anything of the kind I have seen anywhere. The installation now consists of a complete electrocardiographic apparatus and an Einthoven string-galvanometer. A record made by the latter apparatus is shown. Two more have been ordered, so that the electric energy in three different cardiac planes can be recorded simultaneously.

The entire hospital is wired with connections to both these apparatus, so that any patient in the building can have tracings made without being moved from his bed. They are also connected with an absolutely sound-proof room, which is constructed like a refrigerator and even has the radio vibrations shut out by a cage of wire-mesh, built into the walls and grounded outside.

The clinical amphitheater is wired, throughout, for the electric stethophone, so that each of the 250 students which it seats can hear the heart sounds of the patient being presented, clearly and dis-



Normal Heart Sounds.



From a case of mitral stenosis showing record of rumbling presystolic murmur heard at apex of heart.

tinctly, by applying his stethoscope to the attachment in front of his seat.

There are 27 laboratories in the building, for doing all sorts of clinical and research work.

The x-ray department occupies 10,000 square feet of floor space and has separate sections for plate making, gastrointestinal examinations, chest work, dental work, surgical fluoroscopy and deep and superficial x-ray therapy.

The Dental Building.

The entire first floor is devoted to the out-patient department, where elaborate diagnostic work is done, for thousands of patients every year, by the eleven diagnostic clinics, assisted by the cardiac and x-ray departments. Throughout the hospital emphasis is laid upon the development and use of its facilities for clinical instruction.

The personnel of the institution consists of an attending and consulting staff of 66 physicians; 70 internes, of whom 35 are listed as "residents" and attached to one of the services, and 35 are "rotating"; 104 graduate nurses; 150 pupil nurses; 14 clinical and laboratory technicians; and 546 lay employees—a total of 850 persons.

The hospital is expected to be self-sustaining but no emergency case is ever turned away. Indigent patients from Michigan have their expenses paid by the State or County authorities. Other patients must present a letter from their regular physicians recommending their admission, and are returned to their physicians when they leave the hospital.

The fees range from $3.00 per day for a ward bed, occupied by a resident of Michigan, to $11.00 per day for a private room, with bath, occupied by a nonresident. There are extra charges for special and contagious nursing, operating and delivery room service, x-ray treatments, special sera and vaccines, etc. Patients who are able to pay, in addition to their hospital charges, are expected to do so, according to their ability, on the medical, surgical and x-ray services. All other professional service is free. Those entering the hospital are expected to deposit a sum sufficient to cover the estimated expenses of their care.

Last year the University Hospital cared for approximately 25,000 patients, of whom about half were hospitalized and the other half out-patients. Roughly, one-third of these patients had their expenses paid by the State or County while the rest paid for their service, according to their ability.

There is another function of this medical center which is of interest. This is the Student Health Service, by which every student in this great University, upon the payment of a fee of $5.00 a year, becomes entitled to unlimited consultation service at the dispensary; surgical treatment, when needed, at the University Hospital, with hospital expenses paid for two months; and medicines at cost. If calls are made at a student's room the fee is $1.00.

This service, which is housed in the "South Department" (the old homeopathic hospital), near the campus, has a staff of full-time physicians and an executive and nursing staff, entirely separate from the main hospital, whose salaries are paid out of the revenues of the Service. It is just about self-sustaining.

"South Department." Housing the Student Health Service.

In connection with this Medical Center there is a modern and flourishing dental school and also a College of Pharmacy.

Today, the Medical Center at the University of Michigan ranks among the largest, best equipped and best managed clinical teaching institutions in the country. On its faculty are many of the foremost workers and teachers in the profession. It is a monument to the foresight and untiring efforts of a group of devoted men who had the scientific and professional enthusiasm, the enlightened vision and the inspired courage to set about the accomplishment of the seemingly impossible, and the steadfastness of purpose to work out their dreams to fruition.

Forty Years of Life Insurance Examining

By J. M. FRENCH, M. D., Milford, Massachusetts

I GOT my first ideas of life insurance examining by being myself examined for the Vermont Life Insurance Company.

I had been teaching school one cold winter, by the side of a New Hampshire lake, and one evening I took a severe cold, which nearly developed into pneumonia. It kept me at home for two weeks, and compelled me to give up the school at the close of the term.

Under these conditions, it is not strange that, on my way home, I yielded to the persuasions of a friend who was a life insurance agent, and consented to go with him to the office of his company's examiner, whom I found to be a good physician, a competent examiner, and a gentleman.

He put me through the third degree, and found so many adhesions and other abnormal conditions of my respiratory organs, as the result of my recent illness, that he was able to foresee my rejection, should my application be sent in at this time. In explaining this to me, he also told me that, if I were to postpone sending it in for a year or two, the chances were good that by that time the abnormal conditions would have disappeared, and I would be accepted as a safe risk. But, if I should now be rejected, that fact would greatly prejudice my chances for the future, as it is always more difficult to get an applicant accepted who has once been rejected. He therefore advised me to withdraw my application for the present, and explained to me that, if I did so, he would not send in any report of his examination to the home office, hence there would be no record against me. He did not tell me, however, and I did not know until I learned it from my own later experience, that such a course meant that he would not receive any compensation for the hour and a half of searching examination which he had given me. Of course, I gladly accepted his advice. The result was as he predicted, and I have never ceased to be grateful to him for his kindness to me. What the company would have said had they known of it is another question.

Assessment and Fraternal Insurance

My first actual experience in insurance examining came through the kindness of a good friend, who was the moving spirit in securing a charter for one of the earliest of the horde of assessment insurance companies which flooded the country in the eighties. Thinking perhaps to tempt my appetite while at the same time he buttered his own parsnips, he put the charter of one of his subordinate organizations in my special charge, as general manager, agent, and medical examiner combined. I kept this white elephant on my hands for several years, although during this time I succeeded in obtaining only a small number of members for the association.

I remember that one of these came to me of his own accord, and asked me to insure him—quite an unusual occurrence. He was a fairly healthy looking young fellow, and whatever lesions he had were probably quite elementary; at least they escaped my notice, and the company insured him. In less than a year he died of consumption. This taught me a much-needed lesson, and served as a warning to me ever afterwards to exercise special care in examining persons who make their own applications for insurance. The chances are that they know, or at least fear, that they are suffering from some serious disease, which may make it difficult for them to pass the examination, but they are therefore very willing to make the attempt, and try to put over all sorts of schemes on the unsuspecting examiner, such as I was at this time, but have not been since.

One other lesson I learned, from a study of the fundamental principles or, perhaps I might better say, lack of principles, on which this system of insurance was founded, and from watching how it worked out in practice; namely, that while it was a necessary step in the evolution of insurance, and its promoters may have been honest in their belief that it was the great panacea for poverty, yet, as a system, assessment insurance was little less than a barefaced fraud.

A few years later, I took another step in insurance examining. The assessment plan having failed to work out satisfactorily, the seekers after cheap insurance siezed upon the fraternal idea, and capitalized it to such an extent that, for a considerable number of years, fraternal insurance was all the rage. Here the local body was usually termed a lodge, and the principle of brotherhood was called in, to increase the interest

and lessen the expense. I was a member of and examiner for a number of these lodges. Several of these orders are still in existence, but they have been through many trying ordeals, and have been compelled to increase their rates and change their methods many times. Most of them are now on a good, safe, old-line basis, but it costs the members about twice as much as would ordinary insurance for the same amount, in a first-class old-line company, if they had taken it out at the same age they did this.

Promptness and Confidence

My first considerable experience with the ordinary examinations of the socalled "old-line" companies began in 1889, when I was appointed examiner for the Massachusetts Mutual Life Insurance Company. In my work for this Company, I learned many valuable lessons. One of these was that, whatever other virtues a medical examiner may possess, they will count for little if he lacks the cardinal requirement of promptness in making examinations. An application is of no value to any one of the interested parties until he has been passed upon by the doctor. Every day's delay increases the chance of losing the applicant. A reputation for slackness in this direction will cause the agent to do his best to turn the examiner down, and the company to look out for another doctor.

Another thing I learned was the truth of the old copy-book adage, "Confidence is a plant of slow growth." The company watched me with eagle eyes, to see whether I understood my business and, when I did not, whether I could be trusted to find out; also whether I could be trusted to obey the rules, and follow the instructions given me. At first I noted that they frequently turned down applicants whom I had recommended, and I rightly felt that my judgment did not count with them. But, as I became more familiar with the work, and the way in which they wanted it done, and especially with the medical director's idea of what constituted an acceptable risk, I began to find that more of the company's decisions coincided with my own until, finally, my decisions were seldom reversed.

I never met this medical director personally, but I did get pretty well acquainted with his standard of an acceptable risk. Putting this along with my experience with the other companies for which I was examining, I came to the conclusion that there was no such thing as a standard of examination for life insurance. I am thankful that this is so, for if there is any one thing which I despise, it is undue standardization. But, even if all the companies used the same identical forms of examination, and gave the same instructions to their agents and examiners, there would still be just as many varying standards as there were medical directors of different companies, for the real standard is to be found in the brain cells of the medical director. One man will give more attention to and place more stress upon the heart, another upon the lungs, the kidneys, or the moral hazard, or any one of a dozen other different points. The result is that one company will accept a risk that another will reject, and the reverse is equally true. My conclusion was that a medical examiner needs to give careful study to the mind of his medical director, and to be guided by the result in his work for the company.

Acceptance or Rejection

The main troubles of the examiner come from doubtful risks. To paraphrase Shakespeare, who understood human nature, whether or not he ever heard of life insurance, *"To accept, or not to accept—that is the question*: whether 'tis better for an examiner to suffer the slings and arrows of an outraged company, for writing YES at the bottom of the page, and thereby lessen its profits, or to write NO instead, and by so doing, bankrupt the agent and send the applicant's widow to the poorhouse when he dies?"

Having first learned the standard of the company for which I am examining my chief object in studying an applicant is to settle, in my own mind, whether he ought to be accepted or rejected. When I can answer this question to my own satisfaction, the rest is plain sailing. If, all things considered, he is a good risk—such a reasonable risk as, if properly presented, will be acceptable to the company—then it is my business to so present his case that he will be accepted. In such cases there is no use in cluttering up the report with a minute record of all the little ailments and unimportant symptoms (please note carefully my words) from which he may at some time or other have suffered. And I do not think the medical director wants you to do any such thing. Provided only that he is satisfied that you understand your business and can be trusted to that extent, he is not only willing but glad to have you settle these

things yourself, throw out the chaff and send him only the sound grain.

On the other hand, if I am satisfied that an applicant is not a safe risk, and ought not to be accepted, then I make sure that he does not pass, so far as it lies with me to decide. Sometimes the examiner decides more by intuition, or by the general appearance of the candidate, than by any symptom or lesion, or any combination of these that the risk is an undesirable one. The man who sees the case, if he knows his business, can tell more than the man who only reads his report. Here, too, the case is plain.

Doubtful Risks

But it is with the remaining class, the doubtful risks, that the trouble comes. When the case is on the border line, when you have been back the second and even the third time, and, worse than all, when the company has sent you back to give him the third degree, and still you are unable to decide and give the reason for your decision —whether to advise his acceptance or rejection—then is the time when you may well feel worried, and even lose some sleep. For it is equally an injustice to the company to lead them to accept a poor risk, and to the applicant and his family to turn down a man who needs insurance, and who really ought to be accepted. All that is left to us in such cases is to make our decision according to the best light we can get, without fear or favor.

There is, it is true, what seems to me a better way out of the dilemma, which is followed by some of the best companies today. One of these with which I have had considerable experience is the New York Life, which asks for no decisions or expression of opinion as to the insurability of the applicant, but only for a clear statement of the facts of the case and the conditions found. Do this, and the company's medical director will do the rest. This saves the doctor much trouble, and I think it results in the company's getting a more complete and definite report of the case than would be given under the usual plan.

I have done industrial work for five companies, all of which combined this work with ordinary insurance. All of these companies stand by their examiners when they live up to their instructions, call them down when they do not, and deal fairly with them as a rule.

Know Your Stuff and Stand Your Ground

Once in a while a doctor has to stand up for his rights, and is respected the more for so doing. I recall one instance in my own experience. I had examined a young Italian on an industrial form, and had certified him as a first-class risk. But the decision was held up by the local inspector, who reported that the man looked to him as though he were tuberculous, so the home office asked me to see him again, and to exercise special care in my examinations. I went to see him again, and this time I took the assistant superintendent with me, to make sure that everything was done satisfactorily. I gave him the third degree, and again reported him as a first-class risk; also that he did not look any more like a tuberculous person than did their own representative, who was with me, and could vouch for the fact. I then reminded them that I had been an insurance examiner for some thirty years, and nearly twenty as their own examiner; and that I thought I ought to know more about whether a man was tuberculous or not than a lawyer who never had examined anybody in his life, except with his mouth. And I wound up by remarking that when there was anything the matter with my watch, I took it to a watchmaker and not to a blacksmith. The man went through this time with colors flying, and afterwards served for some years very acceptably as a local agent for the company. I do not recall ever being held up by an inspector of that company afterwards.

Somatopsychosis*

By JOHN BENJAMIN NICHOLS, M.D., Washington, D. C.

THE nervous individual is a common and characteristic type of person familiar to and recognizable by not only physicians but the laity as well. Such individuals are difficult and vexatious subjects for medical practice, and also in their domestic and social relations. They present such a multitude and variety of complaints that, for clarity of diagnosis and effectiveness of therapy, it is necessary to differentiate clearly between the neuropsychic elements involved and genuine, organic, somatic disease. The general term "nervousness," though perhaps somewhat vague and vernacular, is, for lack of a better expression, sufficiently significant and comprehensive to designate just that group of conditions which it covers; although difficult to define succinctly, its meaning is clear enough. Out of this general group may be differentiated a number of distinct conditions, such as hysteria, neurasthenia, psychasthenia, etc.; and among them is a familiar and, to me, well-defined psychic condition which has greatly interested me, and to which, in my own mind, I give the name somatopsychosis.

It may be that only psychiatrists are qualified to expound this subject; and it is with a sense of trepidation and timidity that I venture to consider it. However, medical practitioners in all lines of work have to deal with patients of this type, and necessarily develop their own reaction and attitude respecting them. I have developed some views on this subject, which may be right or wrong; nevertheless, they constitute my particular reaction, and in presenting them I wish it understood that they are not claimed to be any novel or authoritative exposition of the subject, but simply an expression of my own personal impression and conceptions. Being my own personal impressions, I can claim the utmost latitude in my consideration of the subject, even to the extent of selecting my own terminology.

By the term *somatopsychosis* (from σῶμα, body, and ψυχή, mind) I mean that abnormal mental condition in which excessive and inordinate attention and concern are directed to body symptoms and body states. It might also be aptly and succinctly defined as "body-mindedness." The designation *pathomania* (from πάθος, disease, and μανία, madness), disease-madness would be a satisfactory synonym carrying a similar significance. The colloquial expression that a person is "hipped about his health" exactly expresses the conception of somatopsychosis.

The general understanding of hypochondriasis covers about the same ground as somatopsychosis. I believe, however, that the subject is capable of an analysis somewhat broader than and different from that usually accorded to hypochondriasis. The name hypochondriasis originated from the ancient and obsolete humoral pathology, and is meaningless; while the term somatopsychosis so clearly expresses the nature of the condition that, in my own mind, I have taken the liberty of preferring it.

Mechanism of Somatopsychoses

The condition, somatopsychosis, is deeply rooted in human nature and the human psyche. Probably by far the largest part of human activities is the expression of biological instincts deeply implanted in the nature of animals and man through ages of evolution—instincts essential to the preservation and perpetuation of the race. Probably the most powerful of these instincts is that of self-preservation. The fundamental biologic necessity for this instinct is easy to understand, since a race lacking it, and indifferent to the continuance of existence, would soon become extinct. It is a characteristic that would aid greatly in the struggle for existence, and hence would become perpetuated and strongly intensified in the course of evolution. The fundamental importance of this instinct is expressed in the aphorism "self-preservation is the first law of nature." It appears in human beings as the love of life, the fear of disease, the dread of pain, the horror of death. In the conduct of the normal individual's life, a proper share of attention is and should be paid to the condition and needs of the body, and due care exercised to maintain the body-welfare and health. This aspect of the mind, having cognizance of body sensations and conditions, has been termed the somatopsychic element.

This element is not altogether one of unmixed fear and dread. An associated factor is man's intellectual exuberance; his thirst for knowledge; the love of explaining natural phenomena, which is also an innate urge in the human mind. Man's natural

*Read before the Medical Society of the District of Columbia, October 8, 1924.

concern over his physical condition strongly directs his search for knowledge into that field, and engenders a more or less intense intellectual interest in it, quite distinct from dread and fear.

Description

A somatopsychosis consists in an intensification and exaggeration of the somatopsychic instinct, normally a healthy and useful component of the human psyche, to excessive and abnormal proportions so as to constitute a really pathologic condition. The distinction in the significance of the terms may here be noted: the adjective somatopsychic denoting the normal; somatopsychotic the pathologically exaggerated.

Individuals manifesting a somatopsychosis give excessive attention to trifling symptoms and sensations, far out of proportion to their actual importance. They feel exaggerated concern and solicitude for their bodily well-being. They complain of the greatest multitude and variety of ailments. Reasonable prudence for the care of their health gives way to unreasoning panic. Nothing on earth interests them so much as their bodily symptoms, sensations, and states. These are constantly in their thoughts, and the incessant theme of their conversation, to the utter boredom of their auditors. Their self-centered loquacity is well-nigh interminable; and it is amazing in what a flood of words they can dilute a a minute kernel of fact. They theorize excessively about diseases in general, and their own ailments in particular. In many cases practically no other subject can gain their attention or consideration at all. They make constant and excessive demands on the other members of their families for sympathy, attention, care, and nursing service. In this they are utterly selfish; and without compunction, or at least without realization, they enslave family associates, sacrifice their prospects and damage or ruin their happiness and lives. Mothers, for instance, will, throughout their lives, demand exclusive and continued care and service from their daughters, compelling these, until too late, to forego advantageous matrimonial or other settlements in life, and at death leaving them to a stranded and barren existence. The lot of those condemned to live with somatopsychotic individuals is trying and pitiable; they are kept in a constant state of unnecessary servitude and harrowed anxiety, or, at least, of everlasting patience and boredom.

Relation to the Physician

Naturally, the physician is one person who carries a great appeal to the somatopsychotic patient. She (or he) considers him a willing, interested, and sympathetic listener to her tale of woe. There is no other way on earth in which she can derive so much enjoyment and satisfaction from the expenditure of her money as in spending it for a physician's attention. To him she pours out the voluminous story of her sensations and ailments with tedious and unimportant detail and wearisome repetition, rambling along incoherently, irrelevantly, and interminably. At every visit she insists on detailing the same old endless story of her life. It is difficult to obtain from her definite and succinct information concerning the really important features of her case; in answer to questions she can not confine herself to definite details, but rambles aimlessly off along her own line of thought.

She is not really much interested in or impressed by the physician's advice or opinion in her case, although for her manifold ailments she may be taking a multitude of remedies ordered for her at various times in the past. She is mainly interested in the recital of her own notions, and much less in her physician's expert opinion. She hires her doctor to talk to, not to listen to. Although lucrative, the somatopsychotic patient is the bane and the bore of the doctor's life, waster of his precious time, and a vexation and exasperation to his soul.

In its intensity this psychosis varies in different cases. Its mildest forms are manifested merely by a noticeably increased concern over body symptoms and solicitude over the health; in which the mental balance is not so disturbed but that favorable assurances from trusted medical advisers will allay the apprehensions. The cases range from these slightest perceptible manifestations to those in which the somatic obsession occupies the whole mind and completely dominates the personality. The condition occurs late in life rather than early, and is more frequent and more marked in women than in men. When once established, it is apt to be a permanent or at least persistent and intractable condition, and in tendency or manifestation to continue through the remainder of the lifetime.

Source of Stimuli

Primarily the somatopsychic sense may be aroused and maintained by the trifling sensations or symptoms constantly occurring

even in the healthy body, which may be of no import and yet may excite alarm in those inclined to be excessively apprehensive. But, in addition to these genuine somatic sensations, many of the symptoms complained of by somatopsychotics are doubtless psychogenic, originating in the mind or nervous centers, and projected thence to the periphery, without any organic disorder whatever existing at the points where they are referred and apparently located. The sensory and motor phenomena of the body are not solely matters of automatic reflex action. The mind is included in the circuit, listening in, as it were; and motor and sensory disturbances can be produced by the mind as well as by external stimuli. The phenomena of hysteria show how extreme, varied, and bizarre these psychogenic manifestations may be.

The occurrence of psychogenic symptoms under various circumstances (not alone in hysteria and somatopsychosis) must be definitely recognized and dealt with. They are obvious even to the laity, and are frequently termed "imaginary symptoms"—a designation not always quite correct, since definite objective symptoms may be psychogenically produced (as in hysteria); and to the victim the symptoms are real enough. The symptoms may be self-produced, but they may really exist and are not always imaginary. The doctrine of Christian Science, that disease is the result of mental error, is quite true so far as pschogenic symptoms are concerned. For the attainment of clear diagnosis and effective treatment, it is, of course, necessary that psychogenic disease manifestations be accurately recognized and differentiated from organic and somatopathic morbid conditions.

Symptoms

The psychogenic symptoms manifested in somatopsychosis vary in character. Those of ordinary occurrence are pains referred to various localities, malaise, asthenia, palpitation, gastroenteric disturbances, etc.; in general, disorders of socalled functional character. Oftentimes the complaints made by the patient are extremely vague; she attempts in vain to describe her symptoms, and winds up helplessly with "Oh, Doctor, there is something the matter with me; I don't know just what it is, I can't explain it, but there is something wrong." She has a vague urge of bad feeling which does not crystallize into definite or describable symptoms. Careful investigation fails to disclose any peripheral, local or organic cause for these symptoms. In many instances where somatopsychotic patients have real organic ailments, they display much more concern over their psychogenic symptoms than they do over their much more serious somatogenic symptoms and lesions.

The general character of the somatopsychotic picture varies in different cases, according to the relative development of the various elements.

Varieties of Manifestation

In very many of the cases, the element of dread is not prominent, while that of interest in the morbid manifestations dominates the psychic picture. Patients of this type manifest no especial fear or anxiety about the outcome of their case, but are extremely interested in their morbid manifestations and derive great intellectual satisfaction from the contemplation and consideration of their symptoms. They have a cheerful interest in their ailments, rather than a fearful interest. They veritably enjoy their ailments; and for this type of cases the designation *pathophilia* (the love of disease) would be appropriate. It is to such cases as these that the sentiment is often jocularly attributed—with much truth—that "they are enjoying bad health," or "they are complaining of feeling better and fear they will recover." Some of these individuals even seem to enjoy cases of illness or surgical operations in other members of their household.

In another class of cases the element of fear predominates. To this aspect of the psychosis the designation *pathophobia* (the fear of disease) would be apt. Patients in this class manifest marked anxiety, apprehension, and fear about their ailments, often to a pitiable degree. Considering the anxiety they display over unimportant conditions, one wonders what ecstasy of terror serious disease would excite in them. Sometimes, in patients suffering from grave ailments, dread of the disease seems to be greater than the fear of death, and they commit suicide to end the suspense; thus presenting the anomaly of killing themselves for fear they are going to die.

Sometimes the somatopsychosis, instead of being generalized, is concentrated on special diseases or special organs. Serious diseases that are common or well known are apt to be special objects of concern. Many women, especially when advancing in years, show great apprehension about the develop-

ment of tuberculosis, cancer, or paralysis. Diseases made the subject of extensive popular propaganda or education are apt to form the basis of phobias, as phthisiophobia, syphilophobia, etc. Some subjects have phobias or philias on special diseases, like alimentary disorders, cardiovascular disease, etc. Some of the special phobias, not relating directly to body conditions, may be activated by the idea of peril to life, such as lyssophobia, claustrophobia, agoraphobia, etc.

A common and well-characterized type of somatopsychosis, of this specialized form, is that in which the symptoms and notions have reference mainly to the gastrointestinal tract. The subjects of this disorder spend years, or their entire adult lifetime, in incessant complaints of digestive, intestinal, or abdominal disturbances. The most exhaustive clinical investigations fail to disclose any real functional or organic abnormalities in these cases. The patients go from physician to physician, and make the round of the pseudo-medical cults, but no form of treatment produces more than transient effect. The clinical manifestations, which approximate the conditions ordinarily termed "nervous indigestion," are psychogenic. This class of cases is so common and characteristic that it is almost a distinct entity, and might well be designated "*entero-psychosis.*"

Less frequently the patients have a philia or a phobia for cardiovascular or some other particular disorder. One woman, whom I recall, had an obsessing desire to be told that she had arteriosclerosis; she had her blood pressure taken by many physicians, and, while it never exceeded 150, she exercised great ingenuity in attempting to distort their statements into an admission that she had arterial disease. Others have similar obsessions about heart disease, nephritis, etc.

Diagnosis

The diagnosis and recognition of somatopsychosis should involve little difficulty. Adequate investigations should be made to determine and appraise the various morbid conditions present or complained of, and to differentiate between the somatic and organic symptoms and the psychogenic symptoms manifested. The disorder may occur in an individual aside from and in addition to coexisting organic disease as a relatively independent condition. It presents positive features pointing to its direct recognition, even in its milder forms, aside from diagnosis by exclusion. The exaggerated concern over and attention to body ailments and conditions; their evident domination of the thoughts and personality of the patient; the excessive and incessant loquacity of the patients on the subject of their supposed ailments, are unmistakable features that establish the existence of somatopsychosis. In its milder forms, an obvious fondness for talking about the body symptoms and ailments and increased concern over the body welfare are sufficient to indicate the existence of or tendency to the psychosis.

The differentiation of somatopsychosis from allied ailments is not ordinarily difficult or obscure.

In *hysteria* there is greater emotional upset; and the obsessions are not limited to somatic concern but cover an indefinite range. Hysteria is a more transient condition, not a permanent and deep-seated derangement like somatopsychosis. In hysteria psychogenic symptoms attain maximum development, presenting the most bizarre, definite, and extreme manifestations; while in somatopsychosis these manifestations are apt to be rather vague and indefinite.

The term *neurasthenia* is often used with rather indefinite and questionable significance. After eliminating certain asthenias of strictly somatic origin, I believe that there is left a definite syndrome to which the term neurasthenia may be usefully applied (though the name psychasthenia, if it were not otherwise in use, might be a more significant appellation). My conception of neurasthenia in this restricted sense is that it is a disorder characterized by marked asthenia of psychogenic origin; frequently accompanied by occipital headache or distress and morning malaise; and usually caused by stress from prolonged overwork, trouble, or worry. It does not, *per se*, present any of the characteristic psychic manifestations of somatopsychosis.

Etiology

The etiology of somatopsychosis is involved in the same obscurity as is the case with other psychoses. The proximate condition is an intensification to exaggerated proportions, of an instinct which is normal, salutary, and even essential to the individual. The cause of this intensification may be obscure or indeterminate in many cases. As a familial neurotic history is frequently associated with it, heredity is obviously an etiologic factor. It is exceptional in youth and adolescence; the con-

ditions of later life somehow favor its development. Psychic traumas and shocks; experiences involving personal danger or injury and arousing fear and terror; suppressions; disadaptations, etc., may be causative factors. Idleness, self-indulgence, introspection, too much attention and sympathy from family associates, and modes of life in which the mind and body are not kept fully and healthily occupied by outside interests, favor its development. Traumatic psychoses are a related condition.

Treatment

In the treatment of somatopsychosis, the first essential is an adequate physical and clinical examination of the patient and appropriate treatment of all functional or organic derangements present. Beyond this, the treatment is essentially of a psychotherapeutic nature; and this may tax the resources, ingenuity, and patience of the physician to the utmost—and even more.

The patient, and his family associates as well, should be constantly and repeatedly assured that the ailment is not of organic and somatic character, and that no serious developments or consequences will result. Persons not too somatopsychotic, and otherwise of good sense and strong character, will be sufficiently impressed and satisfied by such reassurances from trusted medical advisers that their anxiety over their health will be kept under proper control. Even if the concern of the patient is not thus completely allayed, such assurances will have a helpful effect.

Suggestion may be employed to obtain whatever benefit it may afford. Even if positive suggestion is of no avail, care should be taken to avoid suggesting to the patient the existence of morbid conditions. The symptoms present, real or imaginary, should be ignored and minimized so far as possible, and as carefully by the family associates as by the physician. The attention of the patient should not be too pointedly directed to body ailments by unnecessary or excessive clinical examinations or treatment. The expression of solicitude or sympathy for the patient should be avoided, as that would tend to accentuate the obsession.

The constant maintenance of the proper psychic environment for the patient is essential. The relatives and associates must cooperate with the physician and present precisely the same psychotherapeutic attitude toward the patient as does he; otherwise the efforts of the latter will be nullified. They should be instructed as to the real nature of the patient's ailment, and reassured that it does not imply somatic disease that may lead to serious consequences and outcome. In this way their anxieties as to the patient's welfare will be allayed, and they will better be enabled to maintain with serenity and sincerity that unconcerned attitude that is necessary in the management of the case. They must constantly present an appearance of skeptical unconcern and sensible indifference to the patient's fancied ailments, and of confidence in her physical well-being. Manifestations of sympathy and anxiety should be avoided, the patient's multitudinous complaints should be ignored and minimized, and her attention kept diverted from herself and directed into other and more wholesome channels. This may seem an unsympathetic attitude, but it is essential to the patient's real welfare.

Healthy and full mental activity should be cultivated along wholesome lines. If the mind can be kept fully occupied by other interests, as by an engrossing occupation, or diversion, or hobby, or amusement, or change of scene, the patient's attention may be directed away from her body condition, and the somatopsychic factors of the mind reduced to their normal and proper proportions.

If misdirected activity of the imagination can produce morbid psychogenic manifestations, then a diversion or reeducation of the imagination into wholesome channels should do away with those morbid results.

Literature presenting a rational exposition of the psychic and physical factors of disease and health, and of an elevating and inspiring spiritual character, should be beneficial in many cases of this psychosis.

I am not convinced of the applicability or usefulness of psychoanalysis in these cases; but if the origin of the somatopsychotic state can be traced to a mental trauma or a suppressed complex, the corresponding psychotherapeutic treatment would be appropriate.

The various psychotherapeutic cults, Christian Science, New Thought, Couéism, and the like, however fantastic their doctrines may be, frequently bring into operation a fervent faith and influence that produce great psychic betterment. While the scientific physician can not consistently countenance these irrational cults, it is incumbent on him to institute a psychotherapy that will yield benefits equivalent to those that the cults frequently produce.

In the milder manifestations of somatopsychosis the measures above mentioned may bring the condition under due control. In more marked cases, mitigation of its manifestations may be accomplished. In the extremer obsessions it may be difficult or impossible to make much impression, and the most that can be attained is the establishment of some sort of *modus vivendi* that will make the situation more bearable, at least to those unfortunates who are in constant, intimate, domestic association with the patient.

Physicians Must Give More Thought to Psychic Conditions

The medical profession is far more efficient and successful in the treatment of the physical ailments than of the psychic ills of mankind. The great achievements and the principal interests of regular medicine are along material, physical, and somatic lines. That is well, so far as it goes; but the people demand vastly more than that. They demand satisfaction of their psychic needs, as well as alleviation of their somatic ailments.

In the treatment of the mental ills of mankind the medical profession in general is apt to be indifferent, impatient, and ineffective. Medicine is too materialistic, and not sufficiently spiritualistic. Appalled at the difficulties that beset life, and terrified at the imminent perils that menace existence, humanity frantically seeks help and comfort. If the medical profession does not afford that help, the people will naturally seek for it elsewhere, from cultists, faddists, fakirs, mystics. In desperately grasping at straws of hope, the judicial and critical faculties are apt to be distorted; hence the selection of therapeutic systems by the public is often not guided by a high degree of reason and judgment. Hence also arise widespread misunderstanding, distrust, dissatisfaction, and hostility directed against regular medicine.

The people do not altogether deserve the reproaches directed at them by the profession for following medical heresies. Much of the fault rests upon the physicians, for failing to meet the psychic wants of man, deep-seated in human nature. The spiritual needs of man lead also to the development of ecclesiastical and theological systems.

The ancient association of the priesthood with medicine had a profound and fundamental significance; man's need for aid is of the spirit as well as of the flesh, and the two are intimately related. Medicine needs to regain much of the priestly attitude and priestly functions. Brilliant as have been its materialistic achievements, scientific medicine has been deficient in the application of psychotherapy and has failed to hold the allegiance of large sections of the community; along these lines lie great opportunities and possibilities.

The Nervous Invalid and The Decrepit Invalid

By J. MADISON TAYLOR, M.A., M.D., Philadelphia

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NO TASK confronting the clinician taxes his resources more than to gain a fair working comprehension of the dominating causes and hindering effects of cases of protracted disease or invalidism. This situation may be described as one of convalescence, since improvement can be safely promised in both groups, mentioned in the title, often beyond our expectation. They should, however, be clearly differentiated, otherwise disappointments are assured.

The distinguishing features of the two types of invalidism follow naturally upon the particular causes producing them. In most instances both sets of causes commingle. Thus confusions are formed, baffling to the very elect. In selecting suitable measures for relief of the primary causes it should be borne in mind that they change often, bewilderingly. Hence differentiation should be suspended till the situation is worked out to some safe basis for advance.

As to the degree and quality of relief obtainable, cures can be affected in some persons. In both varieties this is occasionally possible. In both there lie—back of the physical disabilities—abnormal mental situations or peculiar habits. These obstruct the powers of restitution from opposite or antagonistic directions, as will be alluded to in the description of each.

The Desire to Recover

In cases of both groups a passive opposition exists—either an apathy or an undefined resolve to stay as they are—which savors of earnest or persistent stubbornness. The only clear evidence of free will, self determination, or personal choice of conduct or behavior, is the natural impulse to advance—to become better and more worthy of living. This latent trend is far less powerful than the optimists — the religionists—would have us believe. Unless it be cultivated it dies easily and early.

As inherent powers grow in mass, variety, and effectiveness; as resistance to depressing causes increases; so do capabilities for throwing off the shackles of ill health become enhanced. By far the most potent power is the *wish*, the *desire* to reconstruct. Absence of a dominating wish to get well is the chief barrier to recovery.

When these impulses to rise above one's infirmities become strong enough to shape the purpose, and as the real obstructions—effects of disease or injury—fade away, then can the reparative powers of nature assert themselves effectively. Here is where realities grow dim and illusions intrude. The real proposition is to bring about harmonious readaptation in the governing forces of the mind and in controlling the dissociating forces, the commotions in the emotional sphere.

In this brief sketch we will assume that the case has been well studied for concrete, determinable hindrances to recovery, and these have been removed, compensated or allowed for, whether they have arisen from familiar origins, such as general or local infections, grave metabolic disorders, or other sources.

When such hindrances, direct or contributory, have been allocated and suitably treated, there still persist individual peculiarities of endowment, of disposition, or of phenomena, the outcome of variations resident in the particular patient. As to the anomalies much is now becoming known or the trends recognized which were aforetime not known nor suspected.

For example: Sir Thomas Horder, in a recent address in London, took as his subject: "New Diseases For Old."

He cited (Interstate Post-Graduate Assembly of America, *J. A. M. A.*, June 6, 1925) changes now coming to be recognized in the natural history and phenomena of disease. He made significant suggestions, among them to bear in mind that the aim of modern treatment should be to concentrate more on raising the general resistance and reparative energies, especially the nerve tone, and less upon the bacteriopathic situation. This is in line with many current recommendations, such as those of Sir James Mackenzie, Walter C. Alvarez, and others.

The Nervous Invalid

The nervous invalid is the product of emotional shocks; of his own misinterpretation of actualities; of timidity or of disinclination or dread of facing the facts; of viewing these facts in the wrong perspec-

tive; also of the secondary causes which conspired to precipitate these conditions. Likewise he has tenacious habits of dwelling anxiously and luxuriously upon his relationships to realities and the industrious fabrication of unrealities, or even illusions. There is present a degradation of depletion or deviation of energy; excessive sensitiveness and temperamental inadequacies. These are due as much to disuse, misuse, or abuse of native powers as to the abnormalities of action, or to grave pathologic residua. There is also too much leisure and appetite for self attention.

In addition to all these there are astigmatisms of the mind—the omitting to see things in their true proportions. We may say that the distinguishing characteristic of the nervous invalid is that any and every happening in any way brought to his attention is likely to be interpreted in terms of his feelings, impressions or preferences.

Everything is measured by, and through, his highly specialized sensitiveness. The commoner standards or tests used by others may influence him not at all, except as they run the gamut of his sensory anomalies, and as they are determined by his false emotional reactions.

The Decrepit Invalid

The chronic decrepit invalid, on the other hand, is the product of a gradual accumulation of structural decrepitudes; of the obstructive effects of various disease processes, the chief of which is lowered or impaired powers of self adaptation; of strange functional peculiarities and confusions, chiefly acquired.

There are also the by-effects of katabolic vagaries; of anabolic deficiencies; of disharmonies resulting from abnormal forms of life—over-work, under-work, exposure—also of excessive stimuli and responses and of physical shocks, whereby his self-adjusting mechanisms have been thrown widely out of gear.

The condition may be described as a stalling of inter-cellular forces; of dead points occurring in the engine; of deflections in energy transmutations. Here we have a congeries of complicating factors, chiefly structural; a dislocation of automatic habit-paths; a bewilderment in reflex circuits; a depletion through local malnutrition of muscles; an over-tone, or contra-tone or dystone, both of the voluntary and the involuntary systems.

These obstructions can often be materially reduced. When this has occurred, new adaptations can be gained and a fresh start made, either along the old associations or through other associations acting compensatorily. There are, of course, the irrevocable, often noncompensable, effects of injury, of operative deprivation (surgical), and the like.

Then there occur at times blends or combinations of the two varieties as, for example, when the decrepitude is growing through neglect, or through the progress of incurable processes, such as paralysis agitans and spinal cord lesions. The despair grows into horror, and the emotions become bewildered, ataxic, through mental conflicts, changing the nature of the problem from bad to worse.

The Combined Product of Nervous Invalidism and Chronic Decrepit Invalidism

Which is preferable—or worse if you like—to be a chronic decrepit invalid and remain such, philosophically serene, moderately well cared for, or even a dependent upon charity; to be overloaded with incurable disabilities, distresses and narrow limitations, but otherwise a serene, blithe, debonair martyr: or to be a moderate physical wreck with no particular sufferings, of ample means, and to acquire also an admixture of nervous invalidism, mounting terrors, frantic fears of some vague and horrifying thing about to happen; incessantly beset by hobgoblin terrors on each side, in front but especially gibbering behind one's back? The pity of it is that too many long-standing physical invalids become this melange of miserablenesses. Would it not be a blessed relief to be assured that all these threatenings and super-impositions of peril are mere figments of imagery, of tradition, or of emotional imbalances?

Death As a Release

Now let us frankly face the question of that inexorable situation called death. What is death? The nervous invalid is in a perpetual fear of dying. Through his terrors he dies a thousand deaths at various times, and in diverse forms. Is the awful moment of dissolution a plain realization of fate or a mere transition into another state of consciousness? How shall we reconcile ourselves to the inevitable?

The chronic invalid of either class may have attained a state of philosophic endurance; but might he not become vastly happier by exchanging it for a better one? Is there a better fate than to drag out a useless, burdensome existence?

The episode called death is supposed, by many imaginative ones, to be a crescendo of horrors; even admitting the consolations of religion, and of faith in the powers of things beneficent but unseeable or unaccountable. As a matter of fact, those who know something about the matter through coming into intimate contact with death phenomena, know that it consists merely of a gradual benumbing of consciousness and a gentle passing out into another state of being.

There is ample warranty for the belief that what is called death is merely the culminating point at which one's waking inferences first lay hold upon realities. Through depleting illness this may have been approximated pretty closely. The veil may have been worn quite thin, but is now to be finally thrust aside. So says Basil King in "Abraham's Bosom."

It is highly probable that there are no "departings," but merely changes in states of consciousness. What mortals call death takes them where it finds them in a state of confusion and perhaps transfers them to a place where they *really live*. We tend to keep too close to physical conditions or conceptions (after passing on).

The "man of dust" sees only what he perceives through his senses—through his socalled mind. He needs a clarification of his mind through his spirit—the one link with the boundless beneficent forces.

The act of dying is, then, a state of transition between reality and dreaming. Doubts, worries, fears and dreads, puzzlements, and disappointments fade away. We can not follow or define the metamorphosis, but the more we reflect upon the situation the more we feel that there must be something further. We know—or think we know—something of the natural history and phenomena of this "living" state of existence. But the more we ponder on it all the more assured do we become that death is often a way of escape from intolerable and irremediable conditions, and *may* be something far more wonderful than that.

I WILL construct a text:
What a wee little part of a person's life are his acts and his words! His real life is led in his head, and is known to none but himself. All day long, and every day, the mill of his brain is grinding, and his thoughts, not those other things, are his history. His acts and his words are merely the visible, thin crust of his world, with its scattered snow summits and its vacant wastes of water—and they are so trifling a part of his bulk! a mere skin enveloping it. The mass of him is hidden—it and its volcanic fires that toss and boil, and never rest, night nor day. These are his life, and they are not written, and cannot be written. Every day would make a whole book of eighty thousand words—three hundred and sixty-five days a year. Biographies are but the clothes and buttons of the man—the biography of the man himself cannot be written.—From Mark Twain's Autobiography.

Surgical Seminar

Conducted by GUSTAVUS M. BLECH, M.D.

(Note: The Seminar is devoted entirely to the practical interests of surgeons. Problems and their discussions are solicited. Contributors must give their names but whenever desired these will not be published. Questions for this department should not exceed fifty words. Address all communications for the Seminar to Dr. G. M. Blech, 108 North State Street, Chicago.)

Appendicitis (Continued)

Chronic Appendicitis may exist for some time, even for years, without producing symptoms pointing to the seat of the trouble.

Case.—Some years ago I was consulted by a middle-aged physician, with a view to my performing any operation that might seem indicated for carcinoma of the stomach. He had come to the conclusion that he was suffering from that disease because routine dietetic and medicinal treatment for "dyspepsia," at the hands of several physicians, had failed to produce any results. Lately he had lost weight, which made him suspicious.

His history was not typical, nor was his appearance suggestive of malignancy. His only symptoms were distress after eating, some belching, occasional slight nausea, and, while he looked worried, this was believed to indicate merely his reaction to his fears.

The patient was given a thorough physical examination, but all tests failed to bring out anything worth mentioning. There was slight sensitiveness to pressure in the region of the gall bladder, but as there was neither a history nor other evidence of gall-bladder disease, this was ruled out. The sensitiveness may have been due to a distension of the gut.

Appendicitis was suggested to the doctor as the possible solution of his problem, but he became so vehement in his demand for an exploratory operation on the stomach that I was obliged to consent. Laparotomy through the right rectus muscle, sufficiently extensive to expose the stomach and adjacent viscera, showed nothing abnormal on inspection and palpation. The appendix was gently drawn into the wound and found to be chronically inflamed and kinked. Appendicectomy was performed and a cure resulted. A letter recently received confirms the permanency of the cure.

Comment.—There was nothing in this case even remotely indicating appendicitis, yet a preliminary diagnosis was made, not entirely empirically, but on the negative evidence of trouble elsewhere. No reflection is cast upon the gentlemen who had seen this patient, himself a clever general practitioner with a good deal of surgical experience, as almost any one whould have thought of gastric disturbance, perhaps of the so-called catarrhal type. I made the diagnosis on the circumstance that, in chronic appendicitis, reflex or perhaps toxic symptoms manifest themselves in connection with the upper digestive tract. Colitis may produce similar symptoms, but there would have been present some indications pointing to the intestine. A complete radiographic investigation will help toward a differential diagnosis.

Case.—In 1911 a young, single woman came to the hospital on the medical service for a "general run down condition" and vague pains in the region of the right ovary. This woman had the appearance of a patient suffering from cerebrospinal exhaustion. She was lean, sallow, constipated and unable to rouse herself to work. She had consulted a number of practitioners in Ohio and Pennsylvania. Her firm transferred her to Chicago and here she was compelled to seek institutional aid. Her previous treatment embraced vaginal douches and tampons, laxatives, tonics and the like.

The internist prescribed the Weir Mitchell rest cure but without effect. Finally, I was consulted. With the clinical and laboratory data available, a general abdominal and abdomino-vaginal examination yielded no results. There was no tenderness in the ileocecal region, but on palpating lower down, the patient complained of a "sickening" sensation. Palpation of the adnexa showed nothing abnormal.

With the negative data regarding the blood, urine, feces and gastric secretion; with an absolutely negative finding by physical methods, I, nevertheless, believed that

the neurotic factor could be ruled out. Even the internist admitted that there was little to determine a diagnosis of neurasthenia, and that there was some pathological condition which dragged down the ambitious young woman, who depended on her mental and physical energy for a livelihood.

Preliminary Diagnosis.—Meckel's diverticulitis suggested itself as a possible solution of the problem. Laparotomy was proposed and accepted. This revealed a rather unusual condition. A short band not longer than ¼-inch and no thicker than No. 2 catgut connected the tip of the appendix with the parovarium. No pathologic changes could be recognized in either the appendix or ovary on inspection and palpation. The band was snipped off at the parovarium and the appendix removed. The microscope was necessary to determine the presence of a chronic appendicitis.

This patient made a good recovery. She gained weight rapidly and for a number of years remained in excellent health.

Comment.—Here, too, we had nothing definite for a diagnosis of appendicitis and I am frank to confess that we resorted to surgery merely on our conviction that a previously energetic young woman of ordinary temperament, compelled to make her own living, has little time or opportunity to develop the frills of "hysteria." She was ill without doubt, and ill only because there was something organically wrong. A diverticulitis would do it; an adhesion involving the intestinal tract will do it. Internal medicine and conservative gynecologic therapy having failed, the patient had been given the benefit of the doubt and surgery came into its diagnostic, if not therapeutic, rights. That the diagnosis, tentative though it was, was wrong does not matter. One thing is certain; that absence of sensitiveness to pressure in the ileocecal region does *not* preclude the presence of a chronic inflammation of the appendix.

(To be Continued)

Discussion and Solution of Problem No. 2

Recapitulation.—(See March issue p. 185.) The patient is a married woman, 56 years old, sterile; menopause 10 years ago with no genitourinary disturbance at any time. Typhoid fever lasting three weeks, ten years ago; otherwise past history negative. A year ago extraction of all teeth. The gas anesthesia nauseated her. Her family noticed that she had been losing ground before the teeth were extracted. For the past two weeks, in addition to some loss of weight, jaundice was noticed. For two days past, vomiting, nausea and cramps on defecation. After vomiting mucoid material the patient felt better. Examination showed an icteric patient, appearing ill; pulse 120, full and strong; respiration 28; temperature normal. There was slight abdominal distention without muscular rigidity. The abdominal wall itself was slightly edematous but not enough to hide a tympanites. Otherwise the physical examination was negative. Routine treatment was given.

The next day the condition remained unchanged; but the following afternoon the intelligent patient became stuporous. Deep abdominal palpation produced no reaction except that of change of position. In spite of rectal medication the coma persisted and the patient died four days after the first examination. The urine obtained by catheterization showed only a little bile.

The requirement called for the diagnosis and treatment, if any.

Discussion by Colonel George B. Lake, North Chicago, Ill.

The data are insufficient for an accurate diagnosis. We know nothing of the blood picture, and a study of this and of the blood chemistry—if possible—might have thrown much light on the condition. This case well illustrates the value of autopsies in doubtful cases.

The terminal symptoms were those of a profound toxemia, probably of hepatic origin.

On the basis of the report given I should have suggested the passage of a duodenal tube and the introduction of strong magnesium sulphate solution to stimulate biliary drainage.

For the toxemia I should have recommended the use of large quantities of isotonic salt solution, in the veins or by hypodermoclysis, preceded by a venesection, if the patient was robust—blood could have been withdrawn and fluid introduced through the same needle—and followed by hot packs until profuse diaphoresis was obtained. Theobromin-sodium salicylate or novasural, if obtainable, would have favored free diuresis.

Had these measures been pushed vigorously the patient *might* have lived until an accurate diagnosis could be made.

Discussion by General Geo. Acheson, St. Martins, N. B., Canada

To say that this patient suffered from jaundice, probably of intra-hepatic origin,

may not be a very satisfactory diagnosis, the jaundice being merely a symptom of some pathological condition in the liver or gall ducts. Evidently her condition had become serious when the doctor was first called.

Acute yellow atrophy suggests itself as a possible explanation. The symptoms as presented, together with the rapidly fatal termination, correspond pretty closely to those found in this disease; but the age of the patient, and the absence of the usual etiological factors, are rather against such a diagnosis, as well as the absence of albuminuria.

It is just possible that the gas administered for the teeth extraction may have poisoned the hepatic cells, causing inflammation and degeneration. Her run-down condition, prior to the extraction of the teeth, may have been due to oral focal infection, as a remedy for which the teeth were extracted. Such an infection may have supplied an etiological factor in the liver condition.

Another disease that occurs to one in studying this case is hepatic cirrhosis. As Hilton Fagge has said, "although jaundice is not a very common result of cirrhosis, cirrhosis is by no means an uncommon cause of jaundice." When we have jaundice accompanying cirrhosis, it is usually gradual in its onset, slight in intensity, and unattended with pain or pyrexia, but generally associated with ascites. Such a combination is not likely to be found in any other hepatic disease except cancer. We are not told that she had ascites, but that the abdomen was distended, and that there was a slight edema of the abdominal wall. Hepatic cirrhosis is due usually (though not necessarily) to chronic abuse of alcohol—a vice to which our patient is not said to have been addicted.

As between cirrhosis and jaundice of septic origin, I would incline to the latter. If we are not definitely prepared to call it acute yellow atrophy, I think we may venture on a diagnosis of malignant jaundice.

The treatment (of doubtful utility), would be small doses (gr. 1/20) of calomel, plenty of fluids, diuretics, and saline transfusion; in other words, free elimination.

Discussion by Dr. Emil C. Junger, Soldier, Iowa

After consideration of the clinical history and the outcome of the case presented by Dr. Robertson, I believe that it was empyema of the gall bladder. Doubtless there developed an acute exacerbation, possibly based on gangrene of the viscus. The overwhelming toxemia that resulted is certainly capable of producing the phenomena described and the early fatal result. I am particularly anxious to see the actual solution of this problem because I recall a similar case in my practice in which section showed gangrene of the gall bladder.

Discussion by Dr. B. B. Parker, Parker Hospital, Allerton, Iowa

The probable diagnosis meriting consideration is acute yellow atrophy of the liver. There is no need of giving the reasons for this diagnosis as the symptomatology speaks for itself. I am inclined to go beyond the requirement by stating that the patient's trouble began in the mouth. The septic condition, which was probably the indication for the extraction of the teeth, was due to the same bacteria that caused the liver condition. While the anesthesia might have played a minor role, it is probable that the extraction flooded the blood stream with bacteria or toxins, resulting in yellow atrophy of the liver.

In view of the fact that we have no specific or even near-specific for this condition, symptomatic treatment is the only one that can be suggested, and is of no particular importance therapeutically.

Discussion by Dr. J. G. Amthor, Sioux City, Iowa

Dr. Amthor, briefly, comes to the conclusion that this patient had carcinoma of the bile ducts, and, accordingly, all therapy is futile.

Discussion by Dr. John Clark, Latham, Kansas

We do not get the history of gastric disturbance due to gall stones, but they may be there. The extraction of the teeth probably caused a lowering of the resistance. The year of progressive declining health fits malignancy, as does the jaundice of brief duration.

I do not see any acute abdominal condition. The chyle vomited may mean an obstruction lower than the stomach.

The pulse, respiration and temperature mean intoxication. The pain, nausea and vomiting go along with it.

Tuberculosis in the abdomen ought to give us a different picture. I do not think of any kidney pathology, nor of anything in the spleen, although if there is cirrhosis of the liver, there could well be a disturbed function in the spleen. She has been ill a

long time and the usual signs are vague for gumma in the abdomen.

Pernicious anemia could give the declining health, the mental picture, the jaundice and the gastric disturbance, and probably the coma at the end. The whole picture has a tendency to improve under treatment until the last four days. I never saw malignancy do that. The course and symptoms are persistent and unrelievable in malignancy.

Jaundice with more or less gastric disturbance is associated with a number of conditions. We are often not quite able to fit into a scheme all the diseased conditions we see. The end of this case would square with a permanent jaundice from any cause. It is clear she died in coma from the accumulated end results of the jaundice, so that the coma does not interest me.

Metastatic glands about the gall bladder or the ducts from the usual source do not give any evidence of their presence. They could be there. She is not too old for a catarrhal condition and, in a good feeder with plenty of foci always present, a mild affection of the pancreatic duct could suddenly flare up and give us this end. This could, by obstructing the ducts, give the declining health, the jaundice, the vomiting, constipation, and these with the jaundice could give us the bile in the urine, the coma and the abrupt exit.

Coming back to malignancy, it is hardly probable that tuberculosis, syphilis, or cancer are present. The signs common to all these things are absent or poorly related. There is the decline in health, the jaundice, a brief, vague gastro-mental illness ending in coma and death. All these appear to me to point to the pancreas.

Editorial Comment and Solution

I cannot comment on the technical points involved because Dr. Robertson has supplied the solution with his original communication. I do wish, however, to emphasize two things; first, the interesting character of the problem, as evidenced by the fact that our managing editor, though very busy with his other labors, has become sufficiently interested to participate in the discussion like any other correspondent and by the splendid discussions, only part of which have been published; and, second, that no one seems to have been strongly influenced by the fact that in a surgical department none but surgical problems would be published. That is the very thing which pleases me particularly. We here confront a problem which has all the aspects of a borderline case. These are particularly interesting to us because of the diagnostic difficulties involved. I shall now let Dr. Robertson give us the facts.

Permission was granted to open the abdomen, after the undertaker had already embalmed the body. The abdominal organs all appeared to be normal except the liver, which extended across the entire upper abdomen. This viscus was very yellow giving the appearance of malignancy. Nothing abnormal was found in the gall bladder, certainly there were no stones present.

Tissue was sent to the University of St. Louis. The pathologist reported that there was no malignancy but pronounced cirrhosis of the liver.

Discussion of Surgical Error No. 2

Recapitulation—(See March issue, p. 185). A girl aged about 16 had non-colicky, constant pains in the right lower abdomen, which disappeared after two days. The mother of the patient believed a cure was obtained by the drinking of some household decoction. About a month later the attack returned more severe in character. A physician found some tenderness in the right side of the abdomen and diagnosed chronic, recurrent appendicitis and advised operation. After another month the attack recurred, this time causing the patient intense suffering. Examination at this time showed a normally-developed girl, who had never menstruated. Pulse 90; respiration 20; temperature 99; tongue clear; appetite, when free from pain, good; bowels regular but feces are offensive in odor; slight nausea; facies normal. The patient pointed to the right side of the abdomen as the site of her suffering. There is sensitiveness to pressure low down, but otherwise nothing noteworthy. The urine was normal and characteristic in that it contained few epithelial cells. Gynecologic (vaginal) examination was declined. The attending physician again urged appendicectomy and demanded consultation. The consultant denied the presence of appendicitis, made a different diagnosis, recommended a minor surgical procedure, which eventually confirmed his diagnosis.

The requirement calls for the error on the part of the attending physician and the correct diagnosis.

Discussion by Colonel Geo. B. Lake, North Chicago, Ill.

The error in this case was a very common one—the failure to make an examina-

tion adequate to determine the condition present. In my opinion, if a physician suggests an examination which is refused by the patient, he should immediately retire from the case.

On the basis of the lack of menstruation at 16 years of age and the monthly periodicity of the attack one thinks of obstruction somewhere in the utero-vaginal canal, probably low down, as there were few vaginal epithelia in the urine .

Discussion by General Geo. Acheson, St. Martins, N. B., Canada

The physician on his first visit committed the error of making a snap diagnosis of appendicitis on insufficient evidence.

On the next occasion, a month later, the information, that she had never menstruated, should have directed his attention to the possibility of utero-ovarian abnormality, and he should have insisted on a proper examination, or have declined further responsibility. The symptoms as described at this stage were in no way suggestive of appendicitis, and such a diagnosis, with the strong recommendation for operation, was in no way indicated.

I would say that this girl was suffering from retained menses, due to an imperforate hymen, or, at any rate, to some obstruction in the utero-vaginal canal.

Discussion by Dr. Emil C. Junger, Soldier, Iowa

The regularity of the bowel movements speaks against appendicitis while the periodicity of the pains indicates relation to the menstrual function. The fact that this patient had not menstruated should have caused the physician to make a vaginal examination for the purpose of ascertaining the cause. Perhaps there was an imperforate hymen, which could have been remedied easily. If I deem it proper and necessary to examine a patient and my suggestion is opposed, some other physician can have the case.

Discussion by Dr. B. B. Parker, Parker Hospital, Allerton, Iowa

The error committed in this case consisted in the failure of the physician to demand an examination under anesthesia, for there is no doubt that the diagnosis in this case rests between an atresia of the vagina and a simple case of imperforate hymen, with the latter being probably the real cause in this case.

Discussion by Dr. J. G. Amthor, Sioux City, Iowa

This case is particularly interesting to me for I saw a similar one during my service as an interne. A recurrent appendicitis does not recur at regular intervals and the rapid recovery with complete absence of vomiting and with normal bowel function certainly tends to exclude this disease. The attending physician erred in not insisting on at least an inspection of the introitus vaginae, which would have established the diagnosis with ease. The full physical development of the girl, the absence of the menstrual function and the small number of epithelial cells in the voided urine are almost pathognomonic of imperforate hymen.

Editorial Comment

At first I was inclined to gather all the material of the character above represented for a special article, to be published in another (gynecologic) magazine, but on second thought decided to use part of the material for the Seminar.

There is no need of expatiating for every contributor has hit the nail on the head. I was no little astonished to see, in this particular case, what can happen to an otherwise ethical and aspiring practitioner who becomes so obsessed with the idea that every sensitiveness in the right lower quadrant means appendicitis, that he can see nothing else. Here was a buxom young girl—in this particular case of a race noted for fertility—who had not menstruated. Her mother told me that she had called the attention of the attending physician to this circumstance, but that he dismissed it as being perfectly natural in many girls. Later he demanded a rectal examination, but this was declined because the mother feared that the marriage value of her daughter would sink if even the surgeon's finger should "destroy the maidenhead." Appendicitis it was.

When the writer was called in consultation he plainly indicated that it would be necessary to look at "the place where the urine comes from" and consent was readily given. Separation of the labia minora showed a bulging cyst-like wall protruding from the vagina and on another glance even the mother realized that the blood behind was pushing forward the thick, imperforate hymen, which completely obstructed the vaginal outlet. The hematocolpos was relieved by an incision with the cautery, and as the tarry fluid came away like a syrupy

stream, the girl herself was profuse in her thanks.

Neglect of such cases may lead to extremely serious results, and as the textbooks say next to nothing about hematocolpos simulating appendicitis—though experienced gynecologists know it to occur quite often—I thought the error worthy of discussion.

Query No. 4

This query was published in the March issue. Space forbids its recapitulation. It concerns a girl whose compound fracture of the right femur failed to heal after aseptic wiring, suppuration rendering the patient an invalid. Usual antiseptic measures had failed. Advice is sought. The reader should consult the original inquiry on p. 186.

Colonel Lake wants to know how thoroughly syphilis has been looked into, and stresses the fact that the technic and asepsis of bone surgery must be specialistically developed to insure success, which is often not attainable in small general hospitals.

Dr. Junger suggests thyroid feeding and walking on the leg—possibly freshening the ends of the bones. Amputation is the next step.

Dr. Parker suggests that all foreign material, including antiseptic irritants, be kept out of the wound. Rest for the limb, dressed with plain absorbent gauze; calcium lactate subcutaneously; and stimulation of bodily resistance by intramuscular injections of lactigen.

Editorial Comment.—Please read the original query. It gives a history of a previously healthy girl made bedridden by the suppurating wound and non-healing of fragments.

We gave our correspondent the advice which has never failed us in our practice; put the infected limb in an ambulatory splint—there is a fine model to be had by rental or, if need be, improvise one—and make the patient sit up at first and then walk about with the aid of crutches. Make her get out of the house and get all the fresh air and sunshine nature provides—without sanatorium fees—and in a few weeks the suppuration will stop and the pseudarthrosis will disappear.

Of course, in specific conditions specific treatment is indicated, but in the ordinary cases, such as the one asked about, careful exercise, fresh air, sunshine and a cheerful attitude will do wonders. Every time a patient remains bedridden, in nonmalignant cases of a surgical character, the surgeon is seeing too much the lesion and too little the patient as a human being.

Problem No. 4

A young man, 29, shipping clerk, enjoying fair health, awoke one morning to find his right knee very much swollen. His lodge physician declared him to suffer from "rheumatism," ordered hot applications and prescribed powders. These caused him to sweat and he also had some tinnitus aurium (salicylates?). There was no improvement. His fiancée, becoming worrid, sent for another physician, who questioned the patient closely and finally expressed an opinion that the arthritis was tuberculous in character and suggested aspiration with injections of iodoform emulsion.

The diagnosis of tuberculosis so frightened the patient that he—wisely—demanded consultation with—*You.*

You learn that the young man was raised in an orphanage and never saw his parents. After school years he was placed in a store where he rose from errand boy to shipping clerk. He did a good deal of packing, nailing of boxes and lifting, but has done this work for two years. He does not recall any injury, fall, blow or even etraordinary exertion.

His habits have been good. He never drank and never indulged in venery. He smoked very moderately. He had the usual diseases of childhood, but, except for a mild "grip" a year ago, he was always in good health.

The knee, when he first noticed it, was very much swollen, with bluish discoloration of the skin. There was no pain. His pulse, respiration and temperature are normal. The urinary analysis is negative. A thorough general physical examination shows absolutely nothing abnormal. You take blood from the basilic vein for a Wassermann test. The following day the laboratory reports it negative. The arm of the patient shows an ecchymosis about the size of a dollar at the site of puncture of the aspirating needle. There is no change in the knee, the effusion remaining more or less tense. The knee can be flexed without causing pain. The patient has a very pale appearance, but his fiancée says that this is not unusual, he having looked that way for a number of months. For external reasons a blood count has not been taken.

Requirement: (a) Probable diagnosis (differential).

(b) Surgical treatment, if any, indicated.

(c) Medicinal (general) treatment, if any, indicated.

Clinical Notes and Practical Suggestions

Light In The Treatment of Infections

IT IS not the object of this paper to give technic or mode of operation in light treatment, but rather to call attention to the types of infection in which light is a powerful adjuvant.

It happens we are living in a Drug Age. It was not always so. One of the most interesting chapters in the history of medicine is the evolution of treatment. Long before pharmaceutical houses or commercial factories made tinctures and x-ray machines, our fathers knew the value of water, light and motion in treating disease.

But there came a period when commerce reigned supreme and the best doctor was one who could put together the most drugs in a prescription. Without meaning to be in the least sarcastic, we just offer a silent prayer of gratitude to Divine Providence for the marvelous human stomach which was able to survive, say, Warburg's tincture.

The writer is a regular practitioner of medicine and for a quarter of a century has followed the teachings of medicine and surgery. He cannot bind himself, however, to any clique of cult who believe that wisdom is their exclusive property and will die with them. Frankly, he realizes that there is not one single drug used concerning which the physician has any adequate conception of how it acts when taken into the system.

Let us take a concrete example to complete our illustration. An operation is to be performed; ether is administered in one of three ways—by lung, bowel or vein. In a few minutes the patient is unconscious. What has taken place no man knows, yet the discovery of anesthetics is one of the glories of medicine and we use it because experience, that master teacher, showed us its value.

Comes now a great religious teacher who is interested in electricity and urges doctors to investigate and see if this strange force cannot be used to relieve human suffering; but John Wesley was told to attend to his business of saving souls and let doctors cure the body. Until 1895, when the x-ray was discovered, electricity was not respectable in medicine. Until Finsen, in Sweden, and Rollier, in Switzerland, presented to the world hundreds of cured cases, light as a treatment for disease was laughed at.

Light and electricity are so intimately combined in treating infections that they must be discussed together. When your brother doctor asks you how it works, come back like a good Yankee and ask him how an antiseptic works; and when he begins, in a learned way, to talk about hydrogen ions just say, "Words, words, words." He doesn't know; neither do you know the exact modus operandi of light—it just does it.

Certain types of infection are so strikingly benefited by this new method of treatment that it would be well to consider them in detail. Take first boils and carbuncles. Boils are painful but not especially dangerous.

It is remarkable how a single treatment of x-ray and light will dry up a boil. Almost immediately the pain is gone and in two or three days it has come to a head; a small opening is made and no scar is left.

A carbuncle is a different story. Often it is the final break of diabetes mellitus, and in its final analysis diabetes is the story of physical bankruptcy. Metastatic abscesses and a surgical kidney are fairly common as complications of carbuncles so that every case must be watched with great care. Being poor surgical risks, we welcome any treatment that avoids the knife and anesthetic.

X-ray, radiant light and actinic rays from an air cooled apparatus or, in selected cases, surgical diathermy, are the best treatments. Whether the knife or surgical diathermy is used, the large ulcerated area must be healed and the edges watched for

fresh foci. The light furnishes great relief from pain.

Radiant light is used from twenty minutes to three-quarters of an hour according to the case. Many patient go sound asleep during treatment. Surgical tuberculoses are ideal cases for light treatment. When the tubercle bacillus combines with its symbiotic friends, the strepto and staphylococci, it forms a sinus hard to heal. Light doses of x-ray, plus radiant light and fractional actinic radiation will cure the majority of cases, many of which are only made worse by the knife.

Let us remember there is no such thing as a local disease. There is a local manifestation of a systemic disease. Acute appendicitis is a systemic disease with a focus at the appendix; tonsillitis is a systemic infection with the tonsil as the point of entrance. In all systemic diseases two striking changes occur: 1st, changes in metabolism; 2nd, changes in circulation. The patient dies when he cannot recover his equilibrium, both as to metabolism and circulation. The doctor can do the most good by helping nature in her great task. Hence the fractional method of treatment in bone or joint tuberculosis. Its great object is to equalize the circulation by drawing the blood from the congested parts and sending it back vitalized with fresh proximate principles. If the proximate principles, such as calcium, phosphorus or potash, are being thrown out of the system unused, light, properly used, will act as a mordant and fix them in the body in such form that they can be utilized.

Last, but not least, come postoperative infections. True, we have surgeons who will tell you how many cases they have operated upon without a sign of pus. You may not be so fortunate and would like to know how to cut in half the time in the hospital of these pus cases. Any time after a week following a pus appendix or an infection of the abdominal wall, light can be used to great advantage. In a recent article by Rollier he calls attention to the need of physicians learning how to use light if they expect results.

Light is a powerful agent and can make a patient very ill if not rightly used. Light improperly used on the wrong kinds of cases is the cause of many failures, so in closing may the essayist put in some negatives?

Do not buy an x-ray apparatus and expect it to do everything.

Do not buy an electrical cabinet and expect it to practice medicine for you—it won't!

Do not buy a lamp for radiant light and let it anesthetize you into believing it will do your diagnosing and treating.

Finally, one closing positive suggestion. Get the newest books and study, day and night, heat, light and electricity or the chariot of medical progress will run over you.

E. C. HENRY.

Omaha, Nebr.

WHAT TO TELL THE PATIENT

Ever since I began to practice medicine I have been informed, by doctors and others, that if I told a patient he had a supposedly incurable disease he would drop dead with fright. I never believed this and I always have told my patients what I thought was the matter with them. Not one has ever dropped dead! Some have died of their disease—but some have recovered.

Here is an interesting case in which straight talk and full information worked the other way.

A young man came to me whose signs and symptoms clearly indicated that he had tuberculosis, in an early stage. I told him so, and also told him I believed he would get well if he would take my treatment and follow my directions to the letter. He was rather reluctant, as he thought there was nothing wrong with him, but he started in.

I treated him for a few weeks and his temperature went down and he felt better, so he decided I was wrong and stopped treatment.

I hunted up that young man and asked him if he would have stopped the treatment if he *knew* he had tuberculosis. He said no. I then reminded him that his sister had died of the same disease and that his early symptoms were the same as hers, and persuaded him to have an examination by a noted lung specialist. When the report came back, that he undoubtedly had tuberculosis, I showed it to him. He did not fall dead, but he *did* begin treatment again and cooperated so well that he has now been working for two years and has no lung symptoms.

What would have happened to that young man if I had kept my mouth shut and let him go his own way?

J. M. RAPPOLD.

Bandera, Tex.

ERRORS IN DIAGNOSIS REVEALED BY THE X-RAY

Twenty years ago, an injury to the wrist or ankle joint, which on examination elicited no crepitation or other sign of fracture, was commonly called a sprain or tearing of the ligamentous attachments of the bone.

Now, with the more common use of the x-ray, we find that many of the injuries formerly dismissed with iodine and a bandage are definite bone lesions.

Similarly the history that a foreign body has been removed or is not present is not conclusive evidence that such is the case.

Some of these conditions are here illustrated.

Fig. 1.

Fig. 2.

Fig. 3.

Fig. 4.

Fig. 5.

Fig. 6.

1.—Unsuspected fracture of the malleolus of the fibula.

2.—Comminution of the tip of the malleolus.

3.—Socalled sprain of the wrist joint.

4.—Painful lacerated finger; the pain and swelling being attributed to the destruction of tissue.

5.—Seamstress with "rheumatic" pain in her foot. (Note the needle over the metatarsophalangeal joint.)

6.—Finger from which a needle had "positively been removed."

R. STEWART MACARTHUR.

Los Angeles, Calif.

MENTAL ACTIVITY

Those who closely observe the trend of the times have realized that, in this country, the tyranny of dead matter has ended and that the mind and its activities now hold first place. The psychologists even divide the mind into two layers—the conscious and the subconscious; while the metaphysicians recognize a third division—the superconscious, or spiritual mind.

Whether one accepts the teachings of the psychologists and metaphysicians or not, the fact remains that we are coming, more and more, to recognize the important part which mental states and conditions play in the cause and cure of many functional—and perhaps, also, a good many organic—diseases.

There are many today who believe that all disease, except conditions due to trauma—gross or microscopical: by bullets, bludgeons or bacteria—is caused by perverted function of one or more of the internal organs. Even those with very limited powers of observation are aware that the functions of many organs are profoundly influenced by mental states; e.g., the stimulation of the adrenals; the changes in the vasomotor system due to grief and shame—blushing, fainting, etc.; the suspension of gastric secretion during anger; and many other phenomena of the same kind.

The teachings of the psychoanalysts, while by no means acceptable, in their entirety, to all of us, have shown us what tremendous and unexpected effects may be produced upon the body by mental states of which even the patient himself was unaware.

A great Teacher once said, "Whatsoever a man soweth, that shall he also reap." The body is the soil in which the mind sows seed, of one kind or another. If, as has been pretty conclusively shown by many careful investigators, the sowing of the wrong kind of thought-seed may result in profound disturbances of physical health, is it not logical to believe that the sowing of the right kind of seed will result in the restoration and continuance of normal conditions?

Thought is invisible, but it is a very potent force. The *powers* which reside in the medicines we give are also invisible, but the obvious effects which they produce and which we recognize are in no essential respect different from the effects produced by changes in the mental processes.

It is in the mind that we find the distinguishing characteristics of the poet, the musician, the inventor, the successful man, the worthless derelict. The mind is the seat of happiness and misery; of sublimest hope and blackest despair. A man's mind is, in fact, the manifestation of God *within himself*.

Do the medical colleges or any of the authorities teach that drugs will actually *cure disease?* If so, I have failed to find such teaching. We hope, by their use, to so modify the bodily functions that nature's efforts to restore normal conditions will be assisted. Will not a properly directed use of the patient's mental powers accomplish the same result, in many cases?

We did not obtain in a day or a week the knowledge and experience by which we are enabled to practice medicine. Our understanding of the powers and uses of drugs was obtained only by months of diligent study and patient experimentation and analysis of results.

If we expect to meet with success in the use of the little-understood but mighty power which resides in directed thought forces, we must give the matter a degree of attention not unlike that which we have bestowed upon the study of other therapeutic resources; but, if we are willing to expend the necessary time and effort, we will come into relation with a curative agency whose wide usefulness and potency few of us can even imagine.

JAMES HEGYESSY,
Alameda, Calif.

A CASE OF PITUITARY DIABETES

Other factors concerned in carbohydrate metabolism have been neglected since the discovery of insulin. Pituitary diabetes is not so uncommon. It is remarkably independent of the diet and does not respond to insulin like pancreatic diabetes.

The case presented is a patient 50 years old whose mother died of diabetes. The patient menstruated at 14 years and stopped at the age of 16 years. About this time she developed severe migraine attacks at intervals of 1 to 2 weeks and for the last three years at intervals of 3 to 4 days. At 29 years she developed acromegalic features with failing vision. X-ray and perimetric examination showed pituitary disturbance.

At 47 years she developed the usual symptoms of diabetes with high blood sugar and glycosuria. She did not respond to a

maintenance diet and insulin. She was given posterior lobe extract in conjunction with insulin. (It must be emphasized that insulin and pituitrin must not be given together as they are antagonistic.) The pituitrin was given 3 hours after the first dose of insulin. Despite a high blood sugar she did not show sugar in the urine. After a few days on her pituitrin and insulin the blood sugar was still above normal but lower than previously. On pituitrin alone the blood sugar gradually reached normal and remained so for several months. She was free of her migraine attacks and symptoms of diabetes. She passed through an attack of acute gangrenous appendicitis and no reference was made to the treatment of the diabetes. About 9 months later her blood sugar again became high and she had glycosuria. She has been under treatment for 2 weeks with pituitrin alone and she has a normal blood sugar and again feels well.

CLINIC OF DR. R. C. MOEHLIG.

Harper Hospital, Detroit.

SOME IMPORTANT FACTORS IN THE MANAGEMENT OF SICK INFANTS*

The first essential in the management of a sick infant is to make a diagnosis. The effect of a nontalkative patient should be to stimulate a closer observation and examination, and the physician will be able to discover without the words of an individual what is the matter with the infant.

Infants are subject to many and varied infections of all degrees of severity from meningitis and pneumonia to the commoner group, comprising infections in the throat, nasal and postnasal spaces, ears, kidneys, glands and intestinal tract. With poor management in certain types of these infections, the infant may not recover.

Many cases of illness do not even come under the physician's observation; quite a number of them are treated over the telephone and still others get through an acute illness and recover, and even the mother does not know the child has been sick. Her only reaction is to the fact that "the baby won't eat."

There has been a habit among many physicians, and especially those who have not had more recent and intensive instruction in the management of infants, to immediately attack the intestinal tract as the source of the infant's illness. As soon as they hear the telephone or observe the infant which they are called to see, the diagnosis is made of an intestinal infection, or a "stomach upset." The treatment consists in administering a cathartic.

Some of these babies recover in spite of lack of recognition of their trouble; another group of them get worse or do not improve. It is not always possible to make a diagnosis of some of the more serious infections on the first examination, such as meningitis or pneumonia, poliomyelitis, or even a pyelitis, but it is essential that the infant should be thoroughly examined when first seen.

It is safe for every practitioner to assume that no acute illness of an infant is due to teething. If, after careful and repeated examinations of the sick infant, he cannot determine any other cause for the illness, and he finds positive evidence of infection in the gums where teeth are being erupted, he will be justified in attributing the illness to the process of teething. Acute gingivitis or stomatitis in the older infants are not uncommonly seen, but they never occur until the teeth are through the gums.

The constipated infant cannot properly be described as a sick infant. Many babies will be more or less constipated during their whole first year of life, but will thrive, gain properly in weight and have no illnesses. Constipation is usually an incident and not a cause. It is quite proper that the bowels should be emptied of a large amount of fecal matter at the beginning of an acute illness, but one should be careful not to interpret the results of cathartics as evidences of acute intestinal disturbances.

Acute diarrhea in infants is common. It is due in general to two main factors: first, food disturbances; second, actual infections. In contrast to the baby with constipation, who is not to be classed as a sick baby, the baby with a diarrhea is always a sick baby, whether the diarrhea be accompanied with fever or not. It interferes with his proper welfare and progress.

Overclothing is a common source of discomfort to the infant, as well as improper clothing. Flannel bands are nuisances, sources of discomfort and serve no purpose after the navel is healed. Soiled and wet clothing will make an infant protest by vigorous cries. Many times, in health and in sickness, one observes the joy of the infant when his clothes are taken off, and then hear him cry as soon as his clothes are put on.

Feeding is the most important task in the

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management of the sick infant. The first reaction on the infant is one of loss of appetite, followed by refusal of food in acute illness as the next method of protecting himself. Food should not be offered for a period of from twelve to twenty-four hours, depending upon conditions and upon how ill the infant is. When food is resumed, it is usually best to use carbohydrate rather than the protein foods. There are exceptions, and these are usually found in certain forms of diarrhea. Babies that are breast fed at the time of the onset of the acute illness may be deprived of that milk for a very short time only, but should always be returned to the breast. The removal of the infant from the breast is for the purpose of omitting food temporarily not because the breast milk is harmful.

Water is the most important food for the sick infant. There is a general tendency among all infants who have fever to lose a considerable amount of water. There is practically no acute illness in infancy where the child should be deprived of water, except perhaps in an acute intestinal obstruction or an acute peritoneal infection.

The infant, by force of circumstances, is bedridden but other factors which make for rest are often neglected, such as making him comfortable, keeping him in a quiet environment, prevention of unnecessary handling and attempts to quiet the baby by various members of the family or neighbors, thus avoiding many nervous irritants which keep the baby in a constantly disturbed state. Do not allow adoring parents to try to make him show off his first tricks. Finally, after the physician has examined sufficiently to establish a diagnosis, avoid subsequent examination except when it becomes necessary to inquire further into the infant's progress.

Alkalies perhaps find the greatest field of usefulness among the drugs. All other medicines must have very specific and definite indications for their use. The physician should form the habit of writing all of his directions for the care of a sick infant. Make the instruction detailed and understandable.

GEORGE E. BAXTER.

Chicago.

MEDICAL MARTYRS

In the recent yearly reports of deaths in the United States it is noted that the rate for physicians is 17.22 per thousand against 11.9 per thousand for all classes, including infants. An analysis of the causes seems to point that it is not contact with the sick, as might be supposed, but rather the duties imposed upon the doctor, and his readiness to meet emergencies, that brings about this high mortality—heart disease with 22 percent heading the list, and pneumonia with 9 percent following.

The patient with heart trouble is put to bed and freed as far as possible from worries and anxieties, but the doctor having trouble with his heart still sticks to his post and is lost in his care for others. Again, his frequent exposures lead to pneumonia.

The quotation, "Physician heal thyself," cannot apply to those who die in their line of duty. Monuments arise on every side to war heroes but the steadfast medical man is soon forgotten.—*Pharmacal Advance.*

CAN WE CURE PULMONARY TUBERCULOSIS?

If we give quinine enough to make of the blood a quinine solution of approximately one grain of quinine to fifteen hundred grains of blood, we can check the reproduction of the plasmodium of malaria, and thus cure a malarial infection. If we inject a sufficient amount of antitoxin into a person in the early stage of diphtherial infection, we can check the reproduction of the diphtheria bacillus, and thus cure a diphtherial infection. A sufficient amount of emetine in the blood will check the reproduction of the amebæ that cause tropical dysentery, and thus cure the infection.

We can also protect persons and animals against certain infections. We can, by the injection of a small amount of antitoxin, temporarily protect a person against a diphtherial infection; by vaccination we can protect against virulent smallpox; by giving an attenuated anthrax infection to man or animals they can be protected against the virulent form of anthrax; and so on.

In like manner we can partially immunize a hog and then give it the cholera in such a light form that it does not injure the hog but gives protection against reinfection. The same process is used to permanently immunize against diphtheria. The child is partially immunized against a diphtheria infection with the antitoxin and toxin is given while the child is thus partially immune. This produces an infection so slight that it

is not to be noticed. Three such attentuated infections are usually given, of such severity that a practically permanent immunity is produced.

Blood of convalescents is also used to lessen the virulence of certain diseases. The blood of patients just recovering from measles and scarlet fever is now being used to lessen the virulence of measles and scarlet fever, and, as milk contains practically the same ingredients as the blood, we see no reason why milk should not be used for the same purpose. Milk from cows that have had the cowpox should lessen the virulence and shorten the duration of the smallpox; and milk from cows that have been infected with tuberculosis should lessen the virulence and shorten the duration of tuberculosis.

From this partial review of our cures, immunities, etc., it is evident that it is through the use of the blood as a medium that all of our cures, immunities, etc., are produced. Therefore, naturally, we turn to the use of the blood as the medium to be used through which the cure, if any, is to be accomplished in tuberculosis.

In doing so we notice that Pasteur considers all bacterial infections as fermentations, and that all fermentations are terminated by the accumulation of their bacterial products. Therefore, according to the views of Pasteur, if we could saturate the blood with tuberculin, we could cure all cases of tuberculosis. But, as that has heretofore been found to be impracticable, on account of the elimination of tuberculin by the expectoration, fever, night-sweats and diarrhea, we must look to some other possible source for the destruction of the tubercle bacilli if a cure is to be produced.

In looking for a medium which might influence the accumulation of tuberculin by lessening its elimination and by its influence on the accumulated pus, in advanced cases of tuberculosis, let us notice the effect of ether on pus accumulations. In the *Deutsche Medizinische Wochenschrift* (Berlin), Dec. 21, 1923, we note that Kustner found that ether extracts fats from the fatty acids of the pus in peritonitis. After evaporation of the ether the peritoneum is covered with these substances; they have an antiseptic action and continue the disinfecting action of ether. The hyperemia induced by the ether is also favorable. Consequently, he considers the use of ether in large amounts as rational in the treatment of purulent peritonitis. The ether should not be removed with gauze; spontaneous evaporation is better.

Applying these findings to the pus in cases of advanced tuberculosis, let us notice a case in point. Several years ago an exploratory incision was made on a patient of mine to determine the cause of an obscure abdominal condition. The evidence of the patient and her mother was that the bowels were "matted together with tuberculosis", and that the surgeon sewed the patient up expecting her to die with tuberculosis of the bowels. But she got well. I saw her six months ago and she claimed to have been in good health for several years. I do not know what anesthetic was used but presume that it was ether and that the ether either killed the tubercle bacilli and released enough tuberculin from the disintegrating organisms to destroy any that remained or, by its action on the accumulated pus, allowed enough old tuberculin to be produced to check reproduction of the bacilli.

Other cases to the point might be noticed in the production of a total collapse of the lungs. Dr. Shivers, in 1917, read a paper before the Medical Association of the Southwest, at Kansas City, in which he claimed to have cured a few, otherwise hopeless, cases by causing a total collapse of the lung. Under local anesthesia he removed sections of the center of the ribs from the floating rib upward. Then, placing a collapsed water-bag over the lung and binding it tightly with a strong bandage around the body, under ether anesthesia, he inflated the water-bag with a bicycle pump. This expelled the pus from the lung; the expectoration, night-sweats, fever, and diarrhea gradually checked and the patient recovered. Sauerbruck and others have used a somewhat similar process. The mortality from this operation is high and the cures are few, but, as death is certain without the operation, it is sometimes thought advisable. While the printed report of his paper does not give the time required for such an operation, if my memory serves me right, the average time required for Dr. Shivers' operation was about forty minutes.

Pasteur, as above quoted, says that bacterial infections are fermentations and are cured by the accumulation of the chemical products contained in the bacteria causing the disease. To illustrate: Grape juice will continue its fermentation until the accumulated bacterial products destroy the infec-

ting organism. If we take four gallons of grape-juice and after fermentation has commenced, drain out a gallon each day and replace it with fresh grape-juice it is evident that fermentation would never cease. This is what happens in advanced cases of tuberculosis. The pus symptoms—expectoration, fever, night-sweats and diarrhea—eliminate so much of the tuberculin that the fermentation is not checked by the accumulation of tuberculin in the blood.

If, on the other hand, we replace the gallon of the fermenting grape-juice with wine, we will shorten the period of fermentation. This, apparently, is what happened in the case of the exploratory incision and in those cases of collapse of the lung. Something was done that threw enough tuberculin into the blood to check the tuberculosis fermentation. The ether either killed the tubercle bacilli, or, by its effect on the pus organisms, allowed the tubercle bacilli to grow and produce enough tuberculin to saturate the blood and thus check the tuberculous fermentation.

W. S. GREGORY.

St. Joseph, Mich.

[This article contains several interesting suggestions and it will be well for us to think it over.

The conclusions drawn from the arrest or cure in the case of tuberculous peritonitis do not seem wholly sound. It is well known that recovery from this condition sometimes follows a simple exploratory laparotomy; but that such recoveries can be due to the ether given for anesthesia seems rather far-fetched. That such an effect might occur in lung conditions sounds more reasonable.

Comments on this article will be welcome.—ED.]

ADHERENT PLACENTA

I cannot agree with Dr. Thornton when he states (CLIN. MED., March, 1926, p. 178) that he was unable to remove the placenta in several cases. I have met with a number of cases of adherent placenta and have always been able to remove them completely, but it *is not easy*.

In any case where Credé's manipulation will not loosen the placenta within an hour, I enter the uterus with my hand, under strict asepsis, and remove every fragment of the placenta. What I have done, safely and satisfactorily, I believe any other man can do, if he has the boldness and the patience. One's first case of this sort gives one some valuable postgraduate experience.

When one works in the country and alone, as I do, he must be resourceful and think quickly. I once had my whole hand and part of my forearm in a uterus, removing an adherent placenta, when "hour-glass" contraction came on and my hand was caught. A few whiffs of chloroform relaxed the spasm.

After cases of abortion or premature delivery the small placenta is frequently retained and must be removed completely. This should be done with placenta forceps. If the brain, the eyes and the sense of touch are fully used the work can be done thoroughly.

The surgeon diagnoses his case and fits the operation to the conditions. An adherent placenta presents a very delicate and difficult problem, as one must make a diagnosis by means of his judgment and knowledge of anatomy, and operate by the sense of touch alone. It means hard, thoughtful, careful work, but the result is a great relief to the physician and to the patient and her family.

I have ventured to take exception to Dr. Thornton's statement in the hope that my experience may prove helpful to younger men who have had less experience with obseterical practice.

J. R. SMITH.

Warsaw, Mo.

DR. THORNTON DEFENDS HIS POSITION

Just a word in reply to Dr. J. R. Smith's comments on my article in CLINICAL MEDICINE for March. Whether he can agree with me or not, it was a fact as stated. He seems to feel that he could have done better if he had been there, but, being on the job myself and making all the efforts that he indicates he would have made, I feel that I am better prepared to judge what he could *not* have done in these particular cases.

I introduced my hand into the uterus and tried the peeling off process as described in the books, which looks very pretty in theory but which, in my cases, was a failure in practice. In these cases it seemed to me that the placental tissue was firmer than normal—about like tender beef steak—and I could not separate it from the uterine tissue.

Often we see others trying to do the

difficult thing and feel that if we just had a chance we could do it much better and easier, and no doubt this is the way Dr. Smith feels about it, but I have no hesitation in believing that he would have had no better success than I, in these cases.

G. G. THORNTON.

Lebanon, Ky.

EFFECTIVE COOPERATION AMONG PHYSICIANS

The physicians of White Hall, Greene County, Illinois, seeing the folly of struggling along in open or covert competition with each other, and recognizing the unbusinesslike methods and practices resulting from such a course of action, had a vision of what might be accomplished by cooperative methods and organized the White Hall Medical Society, in March, 1918. Every physician in the town joined the Society, and it has been in active operation ever since its beginning, growing more and more helpful to all the members.

Among our earliest activities was the preparation of a "dead-beat" list, and also a delinquent list. Each member made up such lists from his own records and then all were compiled and arranged alphabetically by the secretary. After each name is a number showing how many of the doctors the man owes. Each member has a copy of this complete list.

When a patient whom we suspect to be on one of these lists calls us we can readily verify the suspicion and find out how many of us he has already victimized. If we find he already owes several physicians we ask him to call the Overseer of the Poor and obtain his authority for the care of the case. When the authority is obtained, the patient receives the same attention as anyone else, and the bill is paid out of County funds set aside for that purpose.

About a year ago we decided to use uniform statements, bearing the names of all of us, and do our collecting cooperatively. At the bottom of each statement sheet appears a note, "The White Hall Medical Society is composed of the following members. All members cooperate in collecting delinquent accounts," followed by a list of the names. This has been a wonderful help in collecting old acounts, as people realize that unless they pay reasonably promptly, a time may come when they will have difficulty in procuring medical attention.

We have an established fee, every member making the same charge for the same service, so that no friction arises from this source.

We have not only educated the people to the prompt payment of their doctor's bills, but the arrangement has been highly advantageous to the community in general. One of our prominent business men recently told me that our Society had done the town more good than all the other business organizations, including the Chamber of Commerce, put together.

The Society has had seven members since its beginning, but there have been some changes in the personnel. When a new doctor comes to town we welcome him heartily and explain the purposes and workings of our Society. If he listens to some of the people who are on our lists and who allude to us as "the Medical Trust," and feels that by going it alone he can acquire a large practice, we report the facts to the County Society and he does not gain admission to that body. We feel that one who will not cooperate with his confreres in his own community would be of small value to the county organization.

It usually takes but a short while for the newcomer to learn wisdom and when he has joined us and experienced the benefits of cooperation he becomes enthusiastic.

Some may feel that such an association as this tends to commercialize the practice of medicine; but our bankers and our grocers are organized and so are the irregular practitioners (we once had five chiropractors and an osteopath in the town at one time) and such a society as ours is a matter of simple self-preservation. If we do not receive pay for the work we do we would soon have to turn to some other occupation (plumbing or bricklaying, perhaps) where we would be able to earn a living.

E. J. PEEK.

White Hall, Ill.

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[We are delightful to be able to publish this simple and straight-forward account of a group of physicians who have learned the value of working together as friends and colleagues, instead of against each other, as competitors. More power to the White Hall Medical Society! May it and all its members live long and prosper! (They will!)

If the publication of this article stirs up the physicians in a number of other communities and leads to the formation of a number of such cooperative societies as this we shall feel that this journal has done a

good month's work, if it accomplished nothing else.

All that is necessary to the formation of such a society is a spirit of confidence and helpfulness among its members and someone to start the ball rolling.

As a suggestion, we would venture the proposal that, with such an excellent start, it would be no long step to the formation of a highly efficient and successful clinical group. If each of these seven men would fit himself for the practice of some specialty the first step would have been taken.

A comparatively small investment by each member, especially since the group stands so well in the community, would readily finance the construction of a clinic building or small hospital, by means of which the overhead for clerical, nursing and technical help could be greatly reduced and the efficiency of every member greatly augmented.

In fact, the tremendous possibilities of such a group as this in solving the pressing problems which the profession is now facing are so enormous that we feel ourselves in danger of unbridled enthusiasm and so will pause, before the symptoms become violent.

We sincerely hope that this article will provoke a great deal of discussion and will be glad to give publicity to any reasonable suggestions bearing upon the question, pro or con.—ED.]

FOOT NOTES

Science can replace decayed teeth but it can not substitute new feet.

A wound on the foot is more dangerous than a wound on the hand.

Incorrectly-fitted *stockings* sometimes cause quite as much damage as ill-fitted shoes.

Wet feet are specifically conducive to the development of "colds" and their sequelae.

Not alone tight shoes but also loose ones are responsible for a good deal of foot misery.

M. JAY CHANIN.

(From *Pharmacal Advance.*)

THE MANAGEMENT OF CARDIAC DROPSY

In the last few decades, considerable work has been done in developing new and more efficient diuretics, and results have been achieved through chemical research and, partly, through new empiric observations.

Since Withering first introduced foxglove into medicine, we have been relying on digitalis as the sheet anchor in the treatment of cardiac insufficiency. But we have learned to regulate the dosage of the drug according to the patient's weight, and we have found that the manner in which it is introduced into the body has an important bearing on the results. Thus, very often, where the tincture and powdered leaves fail, the infusion will develop a more lasting diuretic effect. The later preparation should be used more generally than it is in this country.

However, the time comes when digitalis loses its effect, and this usually occurs in pronounced cases of anasarca due to myocardial degeneration. It is here that we are able to render assistance by the use of *strophanthus*, which is more prompt in its effect and less cumulative than digitalis. A single full dose of strophanthus will usually produce a fall in the frequency and an increase in the strength of the pulse in from one-half to one hour. Another point is that it produces no constriction of the coronary vessels—in contrast to digitoxin.

The proper dose of the tincture of strophanthus is ten to sixteen drops, three or four times daily. A little glycerin should be added to prevent precipitation and adhesion of the active principle to the sides or bottom of the bottle (according to Gordon Sharp).

Since the oral administration of strophanthus has proven unreliable, the author has followed the advice of Fraenkel, who highly recommends repeated intravenous injections of strophanthin, where digitalis is not borne or has lost its effect, in chronic myocarditis; the dosage being 1/260 to 1/65 grain (0.25 to 1.0 Mgm.). Great care must be employed in the dosage as, in two cases the author observed in a German Hospital, where a high initial dose was used, the injections were followed by collapse and death.

The initial dose should not exceed 1/120 grain (0.5 Mgm.), the injection being made very slowly, as the drug is very toxic to the heart muscle when it reaches it in excessive concentration. After four or five days the dose may be increased to 1/90 or 1/65 of a grain.

The results I have obtained in two classical cases of cardiac dropsy with this remedy (strophanthin, intravenously) were remarkable: The dyspnea rapidly subsided; the pulse became fuller and more regular; diuresis set in; and sleep promptly followed.

These two powerful glycosides act directly on the cardiac muscles; but we must lend a helping hand to the eliminating organs also. For this purpose the usual diuretics fail miserably, and here research has developed the theobromine compounds, of which theobromine-sodium salicylate (diuretin) and theocin give splendid results. These drugs produce a dilatation of the vessels supplying the heart muscles and kidneys, thus increasing the nutrition of the cardiac muscle and stimulating the kidneys to more active secretion. The dosage of diuretin should be pushed at first to fifty or sixty grains daily and then dropped to thirty-five or forty grains. The distress of the patient, especially the dreaded dyspnea, is greatly relieved by these powerful remedies.

Of late, the Germans have developed, through empirical observation, a new diuretic which may prove to be the most effective of all—novasurol (2 Sodium mercurichlorphenyl oxyacetate with barbital). This organic mercury compound seems to represent the most energetic activator of the kidneys which is at our disposal at the present time. One ampule of 1.0 Cc. injected intramuscularly, or, better, intravenously, has relieved many dropsical patients of from three to ten gallons of water.

The exact manner in which this drug acts has not been fully determined, but probably it acts on the kidneys in the same way as calomel or any other mercury compound; that is, by irritation and stimulation of the tubules.

Naturally it is *contraindicated* in acute and chronic nephritis; severe anemia; fever and diarrhea. The main results have been obtained, as previously mentioned, in dropsy of cardiac origin, but care should be taken to determine the specific gravity of the urine before giving this remedy, as kidneys that are unable to concentrate the urine do not tolerate this remedy. Occasionally, stomatitis and enteritis will occur, when the medication has to be stopped.

One of my patients, a man of sixty who had been suffering with myocarditis for six months, presenting a typical case of dropsy with an enormous ascites; edema of scrotum, legs, hands; marked dyspnea and cyanosis; and who had been sleepless for weeks, was relieved by one intramuscular injection of novasurol, passed six gallons of water in twenty-four hours and enjoyed a sound sleep for many days afterwards.

I put him on diuretin for two weeks, when he again showed signs of decompensation. Again I injected 1 Cc. of novasurol, this time intravenously, with the same brilliant results. I have kept him in good shape for eight months with the use of novasurol (sixteen injections were administered, at intervals of about eight days) and diuretin. Digitalis produced no effect in this case.

Occasionally a combination of novasurol and strophanthin, (both of which may be administered, intravenously) on alternate days, has proved highly effective. The European (especially recent German) literature abounds in clinical corroborations of the value of novasurol.

Conclusions

1.—The use of strophanthin, intravenously, in careful dosage is recommended for chronic myocarditis, where digitalis fails.

2.—Novasurol, an organic mercury compound, is the most effective diuretic at our disposal, acting especially in dropsy of cardiac origin.

3.—The combination of diuretin with novasurol, or strophanthin (intravenously) with novasurol is especially effective in chronic myocarditis.

LEE ISACSON,
Sioux City, Iowa.

WHY DO CHILDREN DISOBEY?

Whether children are obedient or disobedient is, to a great extent, dependent on the standards and requirements of mothers and fathers.

While Tommy is deeply engrossed in play with his toys or in a new book, the carelessly shouted orders of his mother, busy with her dish washing, may pass unheeded, such commands having become so familiar that he has developed the same negative adaptation to them as the stenographer develops toward the hammering of typewriters in a busy office. He may have heard the command and appreciated what was wanted, but experience may have taught him that a command ignored by him is one forgotten by his mother—so why should he worry?

There may, however, be some doubt in his mind what to expect, for on one day mother allows her unheeded request to drop unnoticed, while on the next she may take time from her work to administer swift and sure punishment. Inconsistency in discipline keeps the child in a most upset state of mind, and soon his response to any re-

quest comes to depend on his interest in his immediate occupation and his willingness to take a chance.

It may be that Tommy is capitalizing his disobedience. Often he has heard mother say, after coaxing and pleading a while, "Now, if you eat your dinner like a nice boy, you may have some candy," or "If you stop making so much noise, you may have a penny." If Tommy has learned that such offers follow a lack of response to the first request, it is only natural he should wait until they are made before complying. By holding out, he may obtain greater material gain and also far more attention and interest. It is something to be distinguished, if only as the "despair" of the family.

Threats of action by policemen, "bogy men," and doctors are a most unfortunate method to use in obtaining obedience. Either they cause hampering, fear, and timidity or else at an early age the child comes to realize that they are idle and meaningless and turns them to his immediate advantage. Tommy may learn to play up fear of doctors, for instance, so that by an outburst of yelling and kicking he may avoid having his teeth cared for or his eyes examined.

D. A. Thom.

Boston, Mass.

UNCOMPLICATED INFLUENZA

In answer to a letter asking for our suggestions on the treatment of an uncomplicated case of influenza, we made the following recommendations:

1.—Put the patient to bed promptly in a room which is moderately warm but sufficiently ventilated, and keep him there until he gets well.

2.—Give him a thorough clean-out with one or two grains of calomel given in broken doses, either alone or with podophyllin and bilein, followed by a saline laxative.

3.—Give aconitine or veratrine (either separately or combined with digitaline or strychnine, according to the quality and rate of the pulse and the general condition of the patient) in small doses, frequently, until the circulatory disturbance quiets down.

4.—Give calcidin in 2½ grain doses every 3 hours.

5.—Acetylsalicylic acid (aspirin), salihexin or quinisal, as indicated for pain and restlessness.

6.—If the patient has difficulty in sleeping on account of pain and nervous irritability, give from 1½ to 3 grains of neonal at bedtime.

7.—Irrigate the nose and throat every few hours with a 1:5000 (or weaker) solution of metaphen or with chlorazene solution. Do not make these solutions strong enough to irritate.

8.—Give large quantities of fluids, especially lemonade, all sorts of fruit juices and weak tea. If there is any tendency to pulmonary congestion, give 20 to 30 grains of sodium citrate in lemonade, every two hours.

9.—The diet should be very light and easily digested, but the patient should not be starved. If he has no appetite do not force food.

10.—The patient requires good nursing and quiet. Nobody should be allowed in the room except those who are necessary to take care of the case. Visitors should be excluded and precautions taken to prevent the spread of infection.

This does not pretend to cover every condition or circumstance which may arise, but we believe that the general run of cases, if treated along these lines, as a basis, will do well.—Ed.

APOCYNUM IN CHRONIC NEPHRITIS

One hesitates when making the statement that diseases, usually considered to be incurable, are not beyond the benefit of medical treatment.

Our profession is indebted, to a large degree, to textbooks and medical journals for the knowledge which enables us to become successful physicians, but those who have been long in practice and have talked with many doctors have discovered that a considerable amount of valuable medical knowledge is in the possession of obscure practitioners and has never appeared in medical literature.

About twenty years ago, I met a physician who related his treatment of a case of chronic interstitial nephritis, with recovery. I concluded that he had been mistaken in his diagnosis and forgot the matter.

Some years later I was called to attend a man of 65 years who had a general dropsy and some symptoms of uremia. His urine showed a considerable quantity of albumin and a few granular casts. He had had dropsy, at intervals, for a considerable period, and I made a diagnosis of chronic interstitial nephritis.

In undertaking the treatment of the case,

I recalled the suggestion of my professional friend and concluded to try the treatment he had proposed in this case, with the result that the dropsy promptly disappeared and the uremic symptoms cleared up more gradually. The albumin and casts persisted for six or eight months but they, too, finally disappeared and the patient lived for fifteen years, without any return of his kidney disease, and finally died following a surgical operation.

Eight years ago I was called in consultation to see a woman, 60 years old, who was under the care of three competent physicians. They had treated her for several months, making a diagnosis of chronic interstitial nephritis, and suggested 60 days as the limit to which her life could be prolonged.

Examination showed the patient to be suffering with an extensive, general anasarca and symptoms of profound uremia. She was semi-conscious and could be aroused only with considerable difficulty.

I proposed the treatment which had given results in many such cases, with the assurance that it could, in no way, add to the gravity of the case and might offer a faint hope of relief. Six months later the patient visited her daughter in the adjoining county and she lived for two years longer, dying after an operation for cancer of the breast.

These are only two out of a number of cases which have shown equally gratifying results. The urinary findings in a number of these cases have been confirmed by clinical laboratories in Chicago and Kansas City.

The prescription given in these cases was the folowing:

℞ Apocynum (Lloyd Bros.) ℥ii (8.0 cc.)
Aquae dist. q.s. ad ℥iv (120. cc.)

M.et Sig.: A teaspoonful every 4 to 6 hours.

This treatment should not be given in acute cases, but in chronic nephritis, with extensive dropsy, it works well.

In so serious a disease as nephritis, complications are frequent. The physician should be careful not to overlook the diagnosis and treatment of these.

V. E. LAWRENCE.

Ottawa, Kans.

[We have had no experience in the definitive treatment of chronic nephritis with this remedy, but the concentration known as apocynoid certainly *does* remove dropsy very promptly and might work equally well, in such cases as those of Dr. Lawrence, as does the more cumbersome solution of the specific tincture.

We are in full agreement with the doctor's statement that the practitioners of the country, whose names are unknown to fame, are in possession of very much practical information of the highest interest and value which never gets into the literature. We are trying our best to *get* some of this material into the literature, and this is a specific invitation to those who have found out things that *work*—either in the care of the sick, the keeping of records, the collecting of bills or anything which pertains to the practice of medicine—to tell their professional brethren about them, through the columns of CLINICAL MEDICINE. ED.]

LEFT-HANDEDNESS, STAMMERING AND WORD-BLINDNESS*

All the brain and nerve centers having to do with words—whether we hear, speak, read or write them—are very closely related.

The two halves of the cerebrospinal system are paired throughout, so that one side is an exact *mirror image* of the other. Those functions which are performed by paired organs on the two sides separately—as the motor and sensory activities of the arms and legs—keep their neutral paths on the side affected. Where impressions from two organs blend to form one sensation—as in sight, hearing and smell—one of the impressions must be suppressed or the two must be fused if we are to get a single sensation.

The nervous impulses which have to do with words are specialized on one side of the brain—the left side, in right-handed people and vice versa—so that if we get an impulse to write, coming from the side not commonly used for that purpose, the natural tendency is to produce "mirror writing," because of the pairing of the two cerebral hemispheres.

The sense of sight, in man, consists really of three steps; perception, recognition and association. Before we receive any information from a visual impression we must not only see an object but recognize it for what it is and associate it with other objects or with former impressions.

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*Notes from a lecture by Dr. Samuel T. Orton, Professor Psychiatry at the University of Iowa, before the Chicago Neurological Society, March 18, 1926.

The person who is word-blind perceives the object (the word), but the perception is carried to the cerebral hemisphere which is not specialized for its reception, so that he does not recognize it for what it is but sees a more or less accurate mirror-image of the word, so that the word "dug" is reproduced as "gud," and "tomorrow" as "tworrom" (incomplete reversal).

People who are word-blind usually suffer from a greater or lesser degree of general muscular incoordination.

The close relation between the different word centers is well illustrated by the fact that children who are naturally left-handed will very often begin to stammer if forced to write with the right hand. When they are permitted to go back to their left-hand writing the speech defect promptly clears up.

The problem of these various defects in the management of words is now being studied intensively and we should soon be in a position to offer constructive suggestions for the relief of those so handicaped.

G. B. L.

KOCH'S CANCER CURE

Most of us have read Dr. Koch's theories as promulgated in his printed matter and in the *Journal of the Medico-Physical Research Assoc.*, which seems to have given him a fair chance to present his case. There are, however, important questions we would like to have answered:

Why does Dr. Koch not give the medical profession some idea of his synthetic antitoxin, its chemical nature, the method of preparation, etc.?

If the originator wishes to secure for himself a just financial reward for his many years of patient inquiry and research, he can easily protect himself by process patents and by manufacturing arrangements, as illustrated with insulin and other valuable agents. If 500,000, or whatever number it is that are going to die of cancer during 1926, need this treatment to save them, how can Dr. Koch withhold such life-saving treatment because of his own economic interest? Surely this great human appeal should hasten the wide use of the agent instead of delegating it to a few chosen disciples.

If the preparation is so delicate and unstable and if no one can prepare it but Dr. Koch and no one use it but his selected coworkers, it is very unfortunate for the human race. Why then, in such event, make any propaganda for it? What is the motive? Why struggle for professional recognition? Why plead for a just hearing? The medical profession is more anxious to be shown a successful treatment for cancer than most any other unsolved problem of medical science.

DR. C. E. BLANCHARD in *A. A. A. P. Bulletin.*

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[The formation of the Koch Chemical Company and the Koch Cancer Foundation, recently announced, seems to have altered the status of the case not at all. The formula still appears to be secret and its manufacture in the hands of the Koch Chemical Company, the Cancer Foundation acting as a distributing agency, as well as an association of Koch's pupils.

The remedy is available only to those physicians who are approved by Koch and his associates; and active membership in the Foundation is limited to those who have treated ten cases by Koch's methods.

The only noticeable changes are that the propaganda are to be more widely carried on by means of "Anti-Cancer Centers" in various cities, and that the poor may, under certain conditions, receive the treatment at reduced rates.

Dr. Blanchard's questions still appear to be valid and pertinent.—ED.]

The Leisure Hour

Conducted by GEORGE H. CHANDLER, M.D.

Look In The Mencken Mirror!

THIS is Easter Monday, April 5th, 1926:—and don't you forget it! The alleged "beautiful snow" is piled up outside a foot high, the oil burner is eating up eight-cent fuel at the rate of one cent per minute and the robins are skiing silently; if they should sing they'd grow icicles on their beaks. Eggs are high, hats are higher but spirits are low—in some places. They're being lowered in others and most *nice* people have "flu." Spring, however, is *here*—with chilblains on her retroussé nose—and therefore we sinfully and sibilantly sing, "I wish I was in Pe-o-ria tonight," shove up the thermostat a notch or two and hope you may all "go Maying." Maybe you can when you read this. We have Professor Cox' personal assurance that the snow-drops will be out by that time. Perhaps the ice-plant will be scenting the breeze, too. At present the pussy-willows are still in the catkins and Nature generally (in the middle West, at least) waits that "stirring touch" without which she hibernates.

This naturally brings me to a point where we may consider some indoor matters. For instance, H. L. Mencken, Birth Control, the Volstead Act, the American Yokel (as H. L. M. sees him) and other strange and humorous entities. When one wants to hear things said as he would fain say them, ask Mencken to do it. When one craves titillation of the tintinabulum and a mental massage read the "American Mercury"—or the "Hatrack"—if you can beg, borrow or steal a copy. The Menckenian ebullition which (because of the cheerless climatic conditions) I have just chortled over and am generously passing on, is a copyrighted article appearing in the *Chicago Sunday Tribune*. Therein the author gives us his ideas about two very important (to some people) subjects and pungently portrays the "American Yokel" who, despite Fords, Crosley radio sets and rural postal deliveries, still exists in greater numbers, perhaps, than he (or you) realizes. You may not agree entirely with *all* of Mencken's conclusions—right off the bat, at least—but the more you consider the facts as he arrays them, the more apt you are to give three cheers for those who hold, as Mencken does, that the "one who tries to silence expression of opinion by *force* is the common enemy of all of us" and "the best way to get rid of such opposition is to *thumb the nose at it.*"

Since I was a very small boy I have realized fully that there are some things that can only be properly squelched by such procedure—certain personal feelings, moreover, which may in no other way be adequately expressed—even if you have to run after you have thus satisfactorily relieved your spirit! The "putting of the thumb to the nose" is, if I am not mistaken, spoken of in the Bible as the supreme act of derision. "Advanced" as we are, we have not noticeably improved upon it. But —accepting Mencken's word for it—we have become most proficient in other directions. For instance, in speaking of the "birth control fanatics" he says they have not "presented any sure and safe way to reduce the birth rate not already known at every corner drug store." If that isn't thumbing the Menckenian proboscis at the Social hypocricy which afflicts us, kindly name the gesture! SAYS MENCKEN:

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"The grotesque failure of the campaign to put down propaganda for birth control has a lesson in it for the optimists who believe that in the long run, by some mysterious hook or crook, and perhaps with divine help, prohibition will be enforced. They will not heed that lesson, but it is there, nevertheless. Church and state combine to baffle and exterminate the birth controllers. They are threatened with penal servitude and their customers are threatened with hell-fire. Yet it must be obvious that they are making progress in the land, for the birth rate continues to slide downhill.

"Incidentally, it is amusing and instructive to observe that it diminishes most rapidly among the educated and highly respectable classes, which is to say, among those who are ordinarily most law abiding. The same thing is to be noted when one turns to prohibition. The majority of professional crooks, now as in the old days, are teetotalers, but when one comes to the good citizens who scorn them and demand incessantly that the *Polizei* butcher them and so have done with them, one comes at once upon a high density of scofflaws. I know many men of easy means, some of them greatly respected and even eminent. Not two percent of them make any pretense of obeying the Volstead act. And not two percent of their wives are innocent of birth control.

"The reason is not far to seek. Both the Volstead act and the statute aimed at birth control invade the field of private conduct. They take the roof off a man's house, and invite the world to look in. Obviously, that looking in is unpleasant in proportion as the man himself is dignified. If he is a low fellow, he doesn't care much, for he is used to such snooping by his low neighbors. But if he is one who has a high opinion of himself, and is accustomed to seeing it ratified by others, then he is outraged. And if he has any natural bellicosity in him and resistance seems reasonably safe, he resists with great diligence and vigor.

* * *

"Devices for making men good by force are far less opposed in the country than they are in the cities. The yokel is trained from infancy to suffer espionage. He has scarcely any privacy at all. His neighbors know everything that is to be known about him, including what he eats and what he feeds his quadrupedal friends and associates. His religious ideas are matters of public discussion; if he is recusant the village pastor prays for him by name. When his wife begins the sublime biological process of giving him an heir, the news flies around. If he inherits $200 from an uncle in Idaho every one knows it instantly. If he skins his shin, or buys a new plow, or sees a ghost, or takes a bath, it is a public event.

"Thus living like goldfish in a glass globe, he acquires a large tolerance of snoutery, for if he resisted it his neighbors would set him down as an enemy of their happiness, and probably burn his barn. If an official spy or two is added to the volunteer pack he scarcely notices it. It seems natural and inevitable to him that every one outside his house should be interested in what goes on inside, and that this interest should be accompanied by definite notions as to what is nice and what is not nice, supported by pressure. So he submits to governmental tyranny as he submits to the village inquisition, and when he hears that city men resist it, it only confirms his general feeling that they are scoundrels. They are scoundrels because they have a better time than he does—the sempiternal human reason.

"But the city man is differently trained. He is used to being let alone. Save when he lives in the slums, his neighbors show no interest in him. He would regard it as outrageous for them to have opinions about what goes on within the four walls of his house. If they offered him advice he would invite them to go to hell; if they tried force he would bawl for the police. So he is doubly affronted when the police themselves stalk in. And he resists them with every means at his command, and believes it to be his high duty to do so, that liberty may not perish from the earth.

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"The birth control fanatics profit by this elemental fact. It is their great good fortune that their enemies have tried to put them down, not by refuting their ideas, but by seeking to shove them into jail. What they argue for, at bottom, remains very dubious, and multitudes of quite honest and intelligent persons are against it. They have by no means proved that a high birth rate is dangerous, and they have certainly not shown they know of any sure and safe way to reduce it—that is, any way not already known to every corner druggist.

"But when an attempt is made to put them down by law, the question whether they are wise falls into the background, and the question whether their rights are invaded comes forward. At once the crowd on their side is immensely reinforced. It now includes not only all the persons who believe in birth control but also all the persons who believe in free speech, and this second group, it quickly appears, is far larger than the first one, and far more formidable. So the birth controllers suddenly find themselves supported by heavy battalions, and that support is sufficient to make them almost invulnerable.

"Personally, I am inclined to be against them. I believe that the ignorant should

be permitted to spawn *ad libitum*, that there may be a steady supply of slaves, and those of us who are more prudent may be relieved of unpleasant work. If the debate were open and fair, I'd oppose the birth controllers with all the subtlest devices of rhetoric, including bogus statistics and billingsgate. But so long as they are denied their plain rights—and, in particular, so long as those rights are denied them by an evil combination of theologians and politicians—I am for them and shall remain so until the last galoot's ashore. They have got many more allies on the same terms. And I believe that they are winning.

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"The law which forbids them to send their brummagem tracts through the mails is disingenuous and oppressive. It is a part of the notorious postal act, put on the books by Comstock himself and supported by every variety of witch burner.

* * *

"The way to dispose of such laws is to flout them and make a mock of them. The theory that they can be got rid of by enforcing them is nonsense. Enforcing them simply inspires the sadists who advocate them to fresh excesses. Worse, it accustoms the people to oppression, and so tends to make them bear it uncomplainingly. No, the way to deal with such laws is to defy them, and thus make them ridiculous.

* * *

"Thus I deliver myself of a whoop for the birth controllers, and pass on to pleasanter concerns. Their specific Great Cause, it seems to me, is full of holes. They draw extremely questionable conclusions from a highly dubious body of so-called facts. But they are profoundly right at the bottom. *They are right when they argue that any one who tries to silence them by force is the common enemy of all of us.* And they are right when they hold that the best way to get rid of such opposition is to thumb the nose at it."

And that's something to think about till the flowers bloom again.

"I believe," said the impatient man, as he put aside the telephone, "that I'll go fishing."

"Didn't know you cared for fishing."

"I don't ordinarily. But it's the only chance I have of finding myself at the end of a line that isn't busy."—*Merrell Digest.*

A SLIGHT SURPLUS

A sad loooking woman of mature years appeared in the street pushing a baby carriage, in which a fine, healthy looking infant was howling lustily. A friend approached. "Why! Mrs. Lufkins!" she ejaculated, "What a darling baby! But you have no children. Whose is it?"

"You're wrong, my dear," replied the sad faced one, "This is my husband; he went too far with the gland cure."—*The Medico.*

HEALTHY ATMOSPHERE

"Is this a healthful town," asked a stranger of a native of a certain benighted region of the West.

"It sure is," replied the native. "When I came here I couldn't utter a word. I had scarcely a hair on my head. I hadn't the strength to walk across the room, and I had to be lifted from my bed."

"That is wonderful," exclaimed the stranger. "How long have you been here?"

"I was born here."—*O. D. in Arch. Ther.*

Schoolgirl (at the telephone): "Oh, father, do come home. I've mixed the plugs in some way. The radio is all covered with frost and the ice-box is singing "Way Out West in Kansas."—*Success Magazine.*

USE YOUR HEAD

A woodpecker pecks
A great many specks
Of sawdust
When building his hut.

He works like a nigger
To make his hole bigger,
He's sore if
His cutter won't cut.

He don't bother with plans
Of cheap artisans,
But there's one thing
Can rightly be said:

The whole excavation
Has this explanation:
He builds it
By using his head.

—*Bul. Chicago Med. Soc.*

Thumbnail Therapeutics

MILK INJECTIONS IN ANEMIA

In cases of anemia, of simple or pernicious type, marked improvement, in symptoms and signs, often follows the protein shock due to injections of boiled milk.—PROF. KNUD FABER, of *Copenhagen, Denmark.*

HYOSCINE HYDROBROMIDE IN SEASICKNESS

Most mild cases of seasickness can be relieved by hyoscine hydrobromide, 1/400 grain, by mouth, every hour until the patient is better or physiological effects are seen. If there is much depression add 1/60 grain of strychnine. If vomiting is severe give the drugs hypodermically.—DR. DESNOES, of the *United Fruit Co.*

BISMUTH IN SYPHILIS

Following a course of treatments with bismuth alone, Wassermann tests were negative on 70 percent of 27 cases so treated. There were 21 secondary and 6 latent cases in the series.—DR. MUELLER-SCHOEN, in *M. J. & Rec.*

SODIUM THIOSULPHATE IN METALLIC POISONING

In acute cases of poisoning with any of the heavy metals (arsenic, mercury, etc.) sodium thiosulphate should be given intravenously, in doses of 1 Gm., one, two or three times a day, according to the symptoms. If skin burns or dermatitis are caused by these metals, apply the thiosulphate locally in a 1- or 2-percent solution.—DRS. ROBERTS and HOSMER, in *Cal. & Western Med.*

PROGNOSIS IN MYOCARDITIS

Under proper care a patient may live for years with myocardial damage and have a reasonable useful, comfortable and happy life.—DR. F. A. JENNINGS, *Detroit.*

ACUTE OSTEOMYELITIS

Having made a presumptive diagnosis of acute osteomyelitis, one or more openings into the medullary cavity must be made *at once.* Delay is extremely dangerous. If a qualified surgeon and hospital facilities are not immediately available, the attending physician can make the openings in the bone with a carpenter's drill or gimlet, properly sterilized—SIR HERBERT F. WATERHOUSE, in the *Practitioner.*

DYSPHAGIA AFTER TONSILLECTOMY

The pain on swallowing which follows tonsillectomy can be much relieved by letting dissolve on the patient's tongue occasionally a powder of 2½ grains of acetylsalicylic acid and ½ grain of acetanalid.—DR. L. A. HULBERT, of *Springville, N. Y.*

DIPHTHERIA

If parents could be induced to protect their children by the use of toxin-antitoxin immunization there is no reason why diphtheria might not be greatly reduced or even exterminated. — SURGEON GENERAL CUMMING.

SYMPATHECTOMY IN ANGINA PECTORIS

In the *aortic* type of angina pectoris (but *not* in the coronary type) a cervical sympathectomy frequently gives great relief.—DR. F. A. JENNINGS, *Detroit.*

VINCENT'S ANGINA

Good results are sometimes obtained, in cases of Vincent's angina, by the local application of Fowler's solution.—DR. BENJ. H. SHUSTER, of *Philadelphia.*

ITCHING IN THE EAR

Itching in the ear is sometimes due to inflammation at the pharyngeal end of the eustachian tube, and such cases may be relieved promptly by local applications to the site of the trouble.—DR. B. H. SHUSTER, of *Philadelphia.*

OINTMENTS, PASTES AND CERATES

Where medicinal action upon the *epithelium* is desired, pastes are preferable to ointments; while in cases where the deeper layers of the skin are involved and where systemic absorption is desired, true ointments should be used.

Cerates are especially useful to prevent dressings from sticking to ulcerated surfaces. Under other conditions oily or fatty preparations should not be applied to wet or weeping surfaces.—DR. BERNARD FANTUS, in *J. A. M. A.*

BARBITAL SODIUM AND BROMIDES

When given for long periods, the bromides frequently damage the digestive organs and the mental condition of the patient, but barbital sodium seems never to produce these unpleasant results under the same conditions.—SIR MAURICE CRAIG, in the *Practitioner.*

TRYPARSAMIDE IN NEUROSYPHILIS

In order to get the best clinical and, especially, serological results in the treatment of neurosyphilis with tryparsamid, it is frequently necessary to use the drug over a period of two or more years. It is most effective when used in combination with arsphenamine and mercury.—DR. SOLOMON, in *Bost. M. & S. J.*

DIET FOR FLATULENCE

The patient suffering from intestinal flatulence must not eat: cabbage, radishes, salads, all legumes, pears, plums, all oily and greasy goods, milk or cheese, fresh bread, pastry, excess of sweets, pork, veal, rabbit, goose, duck, recooked meats, smoked fish, salmon, tea, coffee, wine, beer, or soup. —DR. HARDY, in the *Lancet.*

SODIUM SILICATE IN SENILITY

As a remedy for the skin changes of old age, chemically pure sodium silicate, in doses of 1 cc. of a 1-percent, watery solution, given intravenously on alternate days, up to 15 or 20 doses, is sometimes very beneficial, restoring to the dry and hardened tissues the suppleness and elasticity of youth.—FRIEDRICH LUITHLEN, in *Wien. Klin. Wchnschr.*

TREATMENT OF BREAST CANCER

The percentage of three- to five-year cures, in cases of breast cancer, with surgery alone, varies from 28 to 50 percent. Pre- and post-operative radiation, combined with thorough and competent surgery, will increase the percentage of cures to from 50 to 85 percent in the same class of cases. In certain more advanced cases, combined surgery, radium and x-ray yield very gratifying palliative results with not infrequent cures. In the advanced inoperable and recurrent cases, the use of radium emanation seeds and high voltage x-ray, unless the case is extremely advanced, affords considerable palliation or may reduce them to the operable group and, in a small percentage of cases, has shown some remarkable cures. Visceral metastases may receive palliation from high voltage x-ray.—DRS. R. M. DUNCAN and E. D. WARD, of *Los Angeles.*

CALCIUM THERAPY

In cases where calcium therapy, over long periods, is indicated, the chloride is unpleasant and may cause acidity. Calcium citrate, made into 1 Gm. tablets with chocolate, is palatable, effective and tends to render the body fluids alkaline.—DR. A. SCHLOSSMANN, in *Klin. Wchnschr.*

PRURITUS VULVAE

Diet sometimes helps in cases of pruritus vulvae. The following articles should be excluded: sugar, cake, chocolate and all confections and sweets, potatoes and white bread.—DRS. ARNOLDI AND WARNEKROS, in *Münch. Med. Wchnschr.*

DIPHTHERIA IMMUNIZATION

In the presence of epidemics of diphtheria, or even as a routine measure, prior to entering school, all children should be actively immunized against diphtheria, without regard to their Schick reactions, for this test is not wholly reliable, especially in the hands of those who make it but rarely, and in the face of an emergency is a waste of time.—DR. WM. H. KELLOGG, in *Am. J. of Pub. Health.*

HYPERTHYROIDISM

Before doing a thyroidectomy clean up all infected teeth and tonsils *thoroughly.* If you do this the thyroidectomy will frequently not be necessary; and if you do not do it the symptoms will probably return after the thyroid operation.

Male hyperthyroids are easier to treat medically than females, because they obey orders better.—DR. ROBERT C. MOEHLIG, of *Detroit.*

Current Medical Literature

THE STEINACH OPERATION

Much discussion has, of late, been heard regarding the Steinach operation of vasoligation for the relief of the symptoms of senility, and those who are interested in this procedure now have available a full, thoughtful and conservative discussion of the subject by Dr. Harry Benjamin, of New York.

This article appeared in the issues of the *M. J. & Rec.* (New York) for October 21 and November 4 and 18, 1925, and consists of the history of the operation; the technic, in full detail; the indications and contraindications; a considerable number of very instructive case reports; and the author's comments upon his experience. His conclusions follow:

The principal indication for the Steinach operation is premature or physiological old age.

In seventy-seven percent of the cases it has more or less definite, sometimes striking, results in alleviating symptoms of senility, thus prolonging the active period of life.

These results can only be obtained if the correct technic is used and a definite indication insisted upon, and under these conditions the procedure is definitely harmless.

Where no reason exists to preserve the procreative ability of the patient, a bilateral operation is preferable.

The results are not merely temporary, but can be pronounced as lasting several years.

Functional impotence is only an indication, (a) when it is one of the symptoms of senility (then senility is the real indication); (b) when endocrine gonadal deficiency can be assumed as a cause; (c) as *ultima ratio*, after all other treatments have failed.

Those who are interested in this operation would do well to write to Dr. Benjamin for reprints. His address is 239 West 75th Street, New York City.

ADRENALIN (EPINEPHRIN) IN ASTHMA

In discussing a paper by W. Langdon Brown, appearing in the *Brit. M. J.* for August 20, 1925, Hurst stated that, to be effective in relieving paroxysms of asthma, epinephrin must be administered at the *very beginning* of the attack. With this end in view he believes that the patient should be given a supply of the drug and taught to inject it hypodermically. Given in this way, very small doses (1 to 3 minims) are effective.

In cases of status asthmaticus, where the bronchospasm has persisted for days, the attack may be stopped by injecting 3 minims of epinephrin and then, keeping the needle in place, injecting 1 minim every fifteen seconds until relief occurs. This may require 40, 50 or even 60 minims, but no ill effects from these enormous doses have been observed in such cases.

TREATMENT OF BRAIN INJURY WITH HYPERTONIC SOLUTIONS

In *Surg. Gyn, and Obst.* for September, 1925, Weaver reports on 125 cases of head injuries and suggests that, in cases where there is definite evidence of brain injury exhibiting no classic findings of acutely increasing intracranial pressure, yet of the type that experience has shown is liable to develop gradually increased intracranial pressure due to fluid accumulation, something may be done.

Treatment: This is the large class of cases in which hypertonic solutions are used with great success. In the large majority of this group it will suffice to give one-half ounce of a saturated solution of magnesium sulphate every two hours for forty-eight hours (smaller doses in proportion for children). After this, the interval of doses is lengthened day by day as the patient improves, until the seventh to tenth day, when the hypertonic treatment is discontinued. If, despite the oral administration of magnesium sulphate, there should develop any evidences of increased intracranial pressure, such as bilateral choking, stertorous breathing, etc., this treatment may be supplemented by one intravenous injection of fifty cubic centimeters of a thirty-percent sodium chloride solution for quick effect, followed by intravenous injection of ten cubic centimeters of a solution of magnesium sulphate. If, as happens in a few cases, the pressure symptoms continue and especially a hemiparesis develops, then a subtemporal decompression with rubber wick drainage may be resorted to as suggested by Naffziger. The hypertonic treatment in this class of cases is given with the idea of preventing late pressure symptoms caused by fluid accumulation, and thereby doing away with the necessity of late operation.

TRANSDUODENAL IRRIGATIONS IN INTESTINAL TOXEMIA

The use of bacterial implantations and high colonic lavage are in common use in cases of intestinal toxemia, but Dr. M. E. Jutte, of New York, feels that they can well be replaced by transduodenal irrigations.

In the October, 1925, number of *Am. Med.* he gives his technic, which consists in introducing about a quart of hypertonic solution, just beyond the pylorus, by means of a Jutte duodenal tube. This procedure

completely washes out the bowel, from plyorus to anus, in about an hour, and has, so the author claims, no disadvantages and no contraindications.

This procedure is said to be of value in all pathological conditions anywhere in the bowel; to be harmless; not disagreeable to the patient; and adapted to office use.

STOVARSOL (ACETARSONE) IN INFANTILE SYPHILIS

The treatment of syphilis in very young infants is a serious problem, and Drs. Max Soldin and Fritz Lesser make the suggestion, in *Deutsch Med. Woch.* for June 12, 1925, that, in such cases, *acetarsone* be administered, in solution, mixed with the food. They give 0.0625 Gm. (1 grain), twice daily, and gradually increase to four times daily, in 2-year-old children.

In nursing infants with fresh skin lesions the results were almost as prompt and striking as those following the administration of arsphenamine.

In the cases seen in older infants, showing anemia, enlargement of the liver and spleen, stationary weight and positive Wassermann test, the results are slower but have been very satisfactory.

MILK AND EGGS AND ULTRAVIOLET RAYS

An editorial in the *J. A. M. A.* for March 20, 1926, recites the work which has been done, showing that the milk of cows and the eggs of hens which have been subjected to the full effect of the sun's rays or to artificial ultraviolet irradiations contain much larger quantities of the antirachitic vitamin (vitamin D) than do similar products from animals which have not had the benefit of such treatment. The antirachitic potency of the yolks of eggs from irradiated hens was about ten times that of those from nonirradiated hens.

This explains the well-known fact that rickets is most prevalent in the late winter months, when the animals have been deprived of the ultraviolet rays during the weeks of gloomy weather and have been fed upon food which also lacked this potency.

It suggests the idea that the producers of these staple food articles will soon have to make arrangements to have their cows and hens irradiated during the winter months.

FOOD VALUE OF ORANGE JUICE

A comment in the *J. A. M. A.* for March 20, 1926, calls attention to the fact that the regular administration of orange juice is followed by an increase in the retention of calcium and phosphorous in the body and in the assimilation of nitrogen, out of all proportion to the amounts of these substances actually contained in the juice itself.

This effect, which is probably due to a complicated series of biolgical reactions, has not been worked out, but the net practical result of these investigations, to date, is that in cases of undernourished children where, for any reason, milk is unsuitable or unavailable, orange juice, in quantities of 500 to 700 cc. daily, can well take its place for accessory feeding.

ADVERTISING PREVENTIVE MEDICINE

Dr. James C. Small, of Philadelphia, closes an article on the prevention of scarlet fever, in the *M. J. & Rec.*, for January 20, 1926, with a few paragraphs which are so pregnant and so pertinent that we reproduce them here, in the hope that they may provoke comment from our readers.

"The big task which faces those interested in preventive medicine in this matter is the application of these methods in communities of persons. The discovery of a law or of principles beneficial to a community does not, in itself, benefit the community. It is the application which benefits.

"Some one has said that one of the difficulties with constitutional government is—'that governments move on, while constitutions stand still.' More and more in these days of preventive medicine do we find its progress hampered by our code of medical ethics, which has not been revised to meet the needs of preventive medicine. Preventive medicine needs ways and means to parade its stock-in-trade before the public eye. Medical societies should take a lesson from modern business corporations. The radio business was built up so quickly to present proportions through public meetings and personal appeal. Certainly people desire health more than they long for a radio apparatus, if they are only made to realize it. They can be made to realize it by the use of proper appeal from medical societies through the medium of the press. This appeal should give definite instruction in the benefits from the practice of these principles; should show the failures of methods formerly practiced; should specifically direct persons to their family physicians; should give them an idea of the relative insignificance of subjecting themselves to the procedures; and give some approximation of the expense involved. Most important of all such appeals should be repeated daily for long periods and properly placed in the advertising columns of the newspapers.

"The educational program which has been employed in connection with diphtheria prevention should aid in this program for prevention of scarlet fever. The methods of arousing interest in both of these important procedures should, however, be changed, especially since those employed in the diphtheria work cannot be called highly efficient."

INDUSTRIAL HERNIA VS. SEMINAL VESICULITIS AND VASITIS

Dr. Miley B. Wesson, of San Francisco, in an article in *Calif. and West. Med.* for February, 1926, considers the possibility of

hernia developing as a result of strain or injury, and decides against it.

The conclusions reached by Dr. Wesson and those who discussed his paper are as follows:

Hernia is practically always due to the presence of a preformed pouch of peritoneum which follows the testis in its descent into the scrotum and has failed to close in the normal way; it is never the result of a single strain, but is the cumulative effect of a number of strains spread over a considerable period of time. The onset is gradual and is practically never accompanied by pain.

Careful surgeons may disagree as to the presence of a bubonocele, but never as to its etiology.

Practically one-third of all men have preformed hernial sacs, and merely because of a pain in the groin these should not be subjected to surgery, particularly if the prostate and seminal vesicles are pathological.

Hernia developing in the course of duty is a disease and not an injury.

Pain in the groin subsequent to a strain is generally due to vasitis.

Epididymitis and vasitis follow a strain only when the seminal vesicles and prostate are infected.

The repair of a relaxed inguinal ring will not relieve pain due to a tender, inflamed spermatic cord.

A herniorrhaphy in the presence of an acute vasitis is pregnant with dangers to the future virility of the testis.

Blood-stained ejaculation is pathognomonic of seminal vesiculitis, and does not occur with trauma or rupture.

Prostatitis and seminal vesiculitis are very common and occur secondarily to nonvenereal as well as venereal infections.

Pus in the urine, without organisms, commonly indicates either tuberculosis of the kidney or prostatitis.

Seminal vesiculitis, because of its symptoms, is commonly confused with hernia, appendicitis, sacro-iliac diseases, spondylitis, and sciatica.

The study is based on forty-seven cases of vasitis, most of which had been diagnosed as industrial hernia and operations advised. Twelve cases, representing the various types, are reported in brief.

MERCUROCHROME IN PERNICIOUS ANEMIA

In a preliminary report, appearing in the *J. Iowa M. S.* for June, 1925, Dr. P. B. McLaughlin expresses his belief, founded on pathological findings and physical signs, that pernicious anemia is caused by an infection.

On the basis of these findings he and his associates have carried out some clinical tests with the intravenous administration of mercurochrome.

The patient is first given a complete laboratory examination, including a renal function test, and then receives, fasting, a dose of from 3 to 5 mgm. of mercurochrome, per kilogramme of body weight, in the form of a 1-percent solution. The reaction from this dose is usually severe, the temperature rising to 103° or 104°F.

Three days later another dose, about three-quarters of the first, is given, followed, three days later, by another similar dose. The reactions from the second and third doses are much milder.

Solutions are made with crystals of mercurochrome, rather than the tablets.

In 8 cases definite improvement has resulted and has been maintained over periods of several months.

CHIROPRACTIC NOT HARMLESS

The Supreme Court of Illinois (People vs. Walder) has denied the claim of the chiropractors that their practice is "a useful and harmless calling which cannot be regulated by the State," and has affirmed that "if a chiropractor can, by manipulation, move a dislocated vertebra so that the pressure on a nerve can be relieved and paralysis cured, he can by the same process dislocate a vertebra and cause a paralyzed condition. Any method of treating human ailments which, when practiced skillfully, can restore a diseased human body to health is capable of doing great harm when practiced without care or skill. A method of treating human ailments cannot be both useful and harmless. If it is sufficiently efficacious to be useful, it is at the same time capable of producing harmful results."

The chiropractor, no less than the physician or any one else who is to treat the sick, needs to have a sufficient training in the fundamentals of medicine so that he will know at least when his manipulation may be harmful.

J. A. M. A., February 13, 1926.

ULTRAVIOLET RAYS FOR CRACKED NIPPLES

Twelve women suffering from fissured nipples were treated with ultraviolet irradiations by Dr. P. Chatin, who reports his results in the *Bull. de l'Acad. de méd.*, for July 21, 1925.

He used a quartz mercury vapor lamp every other day, beginning with two minutes and increasing by two minutes at each treatment up to ten minutes.

In some cases the pain ceased after the first treatment: the cracks healed rapidly and were completely well in one or two weeks.

BLOODLETTING

Dr. C. S. Danzer, of Brooklyn, N. Y., feels that there are a good many patients who would be benefited by single or repeated bloodletting (or "venipuncture," as he uses a needle and a pair of 20 cc. Luer syringes, with a 3-way cock). He removes from 50 to 250 cc. of blood at a sitting, and repeats every few weeks or months, as indicated, following each treatment by a large

drink of water. His suggestions appear in the *M. J. and Rec.* for February 4, 1925.

Danzer has seen good results follow this procedure in cases of chronic nephritis, cardiac decompensation, with nocturnal dyspnea, chlorosis and secondary anemia, urticaria, eclampsia and arteriosclerosis.

There is no marked lowering of blood pressure—sometimes it is increased—and the happy results seem to be due to the removal of some toxic substances contained in the blood and to dilution of the blood itself.

The method is simple, not especially unpleasant for the patient, and seems well worth trying in the suggested conditions.

FOREIGN BODIES IN THE AIR AND FOOD PASSAGES OF INFANTS AND CHILDREN

Russell S. Rowland (*A. J. Dis. of Child.*) states that the initial symptoms of foreign bodies in the air and food passages of infants and children are often not observed, and therefore no history is obtained, or the history may be obtained and not given sufficient consideration. Usually the higher the foreign body is lodged in the respiratory tract, the more pronounced the symptoms; while the lower down it is, the more marked the physical signs. Frequently in tracheal cases after the initial choking and strangling there is a symptomless period and then the tracheal symptoms develop. Esophageal foreign bodies of considerable size may produce no symptoms at first, but if allowed to remain in the esophagus for any length of time they may cause dangerous ulceration. The position of foreign bodies in the esophagus, as shown in the x-ray plate, in relation to those in the trachea should be remembered.—*Med. J. & Rec.*

DRUGS PRODUCING LEUCOCYTOSIS

The relation between leucocytic activity and body resistance is generally recognized, and it is of interest to note that some of our most potent drugs give rise to a prompt and more or less sustained increase in the number of leucocytes in the blood.

Dr. Burr Ferguson, of the U. S. Public Health Service, feels that the benficial effects of mercury, quinine, the arsphenamines and other drugs may be due, to a notable extent, to their demonstrated ability to produce leucocytosis.

In setting forth his ideas in *Am. Med.*, for March, 1926, Ferguson notes that moderate doses of whisky also cause a pronounced leucocytosis and suggests that this is a logical explanation of the good results which have followed its empirical use in various infections.

VITAL CAPACITY IN PNEUMONIA

The vital capacity is defined as the amount of air a person can expire after the deepest possible inspiration. This varies greatly in various diseases and perhaps is most markedly diminished in pneumonia, in which condition the changes in vital capacity may furnish distinct assistance in diagnosis and prognosis.

Dr. John H. Arnett has studied the changes in vital capacity in 32 cases of pneumonia and, in the *J. A. M. A.* for Sept. 26, 1925, reports his results and states the following conclusions:

1.—In pneumonia, the vital capacity is greatly reduced early in the disease. The determination may therefore be of distinct diagnostic value in doubtful cases.

2.—The greatest reduction generally occurs shortly before the crisis. The advent of the crisis may therefore at times be predicted in advance.

3.—Cases of uncomplicated pneumonia almost constantly exhibit a rapid rise in the vital capacity in the first five to ten days from the crisis. Patients with empyema and delayed resolution do not exhibit such a rapid rise. The vital capacity may, therefore, assist in diagnosing empyema or unresolved pneumonia.

4.—The vital capacity increases gradually for months after clinical recovery from pneumonia or empyema has occurred. In many cases it probably never entirely returns to normal.

New Books

BURROWS: PITFALLS OF SURGERY

PITFALLS OF SURGERY. *By Harold Burrows, C.B.E., M.B., B.S. (Lond.), F.R.C.S. Second Edition. New York: William Wood and Company.* 1925. *Price* $4.50.

The textbooks of surgical theory and practice dwell upon the positive side of the picture and devote little space to the consideration of the accidents which may happen and the best ways to avoid them. These things the young surgeon must find out by experience during his earlier years of practice, and such postgraduate instruction is sometimes very expensive and painful.

One of the most valuable things that can happen to a young surgeon is to come in contact with a man of ripe experience and sympathetic understanding, who, out of the sorrow and self-examining consequent upon his own mistakes, can supplement the younger man's experience with sound precept. Such contacts are not too common in the flesh and still rarer in books, as most men dread to expose their failures to the world.

Here is a book which offers just the type of first-hand, personal advice and admonition we have been discussing, stated in the simple, informal style which seems to be more common among our British confreres than it is with our own writers. They write more nearly as they talk, and their books gain interest and personal attraction thereby.

The discussions are grouped so as to consider the various regions of the body in orderly sequence, from the head downward to the extremities. The final chapter on Sources of Surgical Errors furnishes food for thought for several months.

The paper is light and the type is of good size and well-spaced, so that the book is easy to handle and read. The binding is attractive and the index ample.

We have seen few books which we can more cordially recommend, not only to undergraduates and young surgeons but to many who have been in practice for some time. It carries the conviction of wide and well-considered experience and it reads like a novel.

OSLER & McCRAE: MODERN MEDICINE

MODERN MEDICINE. Its Theory and Practice. In Original Contributions by American and Foreign Authors. *Edited by Sir William Osler, Bart., M.D., F.R.S. Third Edition, Thoroughly Revised. Re-edited by Thomas McCrae, M.D. Assisted by Elmer H. Funk, M.D. Vol. II. Illustrated. Philadelphia: Lea & Febiger.* 1925. *Price* $9.00.

The first volume of this set was reviewed in the February number of CLINICAL MEDICINE, page 139, with comments upon the purpose of the series as a whole.

This second volume deals with Diseases of Doubtful Etiology; Diseases Caused by Protozoa, Spirochetes and Animal Parasites; Diseases due to Physical, Chemical and Organic Agents; and Deficiency Diseases.

The paper and typography are good and the book is well made and well indexed. The plates and text figures, while not profuse, are well-chosen.

Every general medical library should have this series for reference, and those individuals who feel that they can afford it will find it profitable.

ZOETHOUT: PHYSIOLOGY

A TEXTBOOK OF PHYSIOLOGY. *By William D. Zoethout, Ph.D. Second Edition. St. Louis: C. V. Mosby Company.* 1925. *Price* $4.50.

This book, according to the author, is intended for students in Dental, Pharmacy and Normal schools. It is written in an interesting fashion and would be a satisfactory text for the study of physiology in any course where the time allowed for the study of this science is limited. This text could not be recommended for the medical student who must needs study this subject in detail. The student of medicine would, however, find many sections interesting and instructive. The relationship between physiology and personal hygiene is emphasized. The book would not be considered a personal hygiene text, however. It contains 587 pages of text and 186 illustrations.

F. J. H.

MACLEOD AND CAMPBELL: INSULIN

MEDICINE MONOGRAPHS, Vol. VI, Insulin; Its Use In the Treatment of Diabetes. *Part I—Physiology by J. J. R. Macleod; Part II—Clinical Section by W. R. Campbell. Baltimore: The Williams and Wilkins Company.* 1925. *Price* $4.00.

Here is a book for the teacher, research worker, and clinician which adequately discusses Insulin and its use in the treatment of diabetes.

Part I. The Physiology of Insulin, by J. J. R. Macleod, should appeal especially to the teacher and research worker, while the clinician will also find much fundamental information here in the carefully digested account of the development of Insulin to guide him in his work In addition to the complete, yet concise, presentation and discussion of the animal work on Insulin, Part I includes a chapter on the methods of preparing Insulin, and one on the physiological assay of the drug as compared to its clinical action.

Part II, the clinical section, is by W. R. Campbell. To the busy clinician, it will perhaps appeal more than Part I. The early clinical experiments, effects on metabolism, hypoglycemia, ketosis, acidosis, coma and diagnosis are taken up in turn. Then the dietetic and the Insulin treatment and its general effects; a chapter on recipes, tables, food equivalents and analysis complete the section.

The nineteen page bibliography, containing approximately five hundred references, will be welcomed by those who care to continue the study of the subject and especially by those who wish to contribute further knowledge to it.

Good scientific style, readable, concise, but not condensed is employed throughout. A folder, additional copies of which may be obtained, entitled "General Directions for Diabetic Treatment With Condensed Diabetes Diet Tests," accompanies the book.

H. C. S.

THE PRACTITIONER: DIAGNOSIS

Again we feel constrained to review a number (or rather two numbers) of the *Practitioner* as a book.

This special, double number for January and February, 1926, deals with Modern Methods of Diagnosis, and covers the ground in such an adequate and practical manner as to deserve the highest praise.

Particularly useful and valuable are the articles on Pitfalls in Diagnosis, the surgical aspect being treated by Sir Herbert F. Waterhouse, M.D., F.R.C.S., in the January number, and the medical by Sir Bruce Bruce-Porter, M.D., in that for February.

Other important papers deal with Cystoscopy, Blood Pressure, Electrocardiography, Skin Reactions, Endoscopy, the use of x-rays and many other topics.

We would suggest that the man who will procure these two numbers and have them bound together will possess a textbook of the highest value, setting forth the most modern ideas regarding diagnosis in an extremely agreeable and practical manner.

The Practitioner is published monthly at Howard St., Strand, W.C.2, London, England, at a price of two guineas per year. The price of these "Diagnosis" numbers is seven shilings and sixpence each.

BESANT: THOUGHT POWER

THOUGHT POWER, ITS CONTROL AND CULTURE. *By Annie Besant. Chicago: The Theosophical Press* (826 *Oakdale Ave.*). 1918. *Price* $1.00.

That mental power can be controlled and cultivated by systematic and premeditated exercises, in somewhat the same way that physical power is cultivated, may, to some, be a rather surprising idea; but when we think it over a little it seems perfectly reasonable.

In this little volume—little in size but large in meaning—the author takes apart the processes of thought in order to see how they originate in the reaction between a man's true self, as the knower; all the other objects in the universe, as the field of that which may be known; and the reactions between these two, which is the process of knowing.

The mind is not the knower, but only the instrument by means of which he is enabled to acquire knowledge by coming into contact with the manifested universe, so that the man's Self is able to use the mind as his tool for carrying out his purposes.

The later chapters contain definite suggestions, in some detail, of the sort of exercises which will build up and develop the mind and bring it under the control of the intelligence, of which it is the servant and vehicle.

The book abounds in such pregnant sentences as the following:

"We do not know things themselves, but only the effect produced by them in our consciousness."

"We cannot greatly modify others, but we can greatly modify ourselves."

"Reading does not build the mind; thought alone builds it."

"The first requisite for competent thinking is attentive and accurate observation."

The man who is sufficiently eager for mental development to put forth some effort in order to gain it will find this a most stimulating and valuable treatise.

BRADBY: PSYCHO-ANALYSIS AND LIFE

PSYCHO-ANALYSIS AND ITS PLACE IN LIFE. *By M. K. Bradby. Second Impression. London: Henry Frowde and Hodder & Stoughton, Ltd., Oxford University Press, Warwick Square, E.C.4.* 1920.

The average lay student, when he starts to read treatises on psychoanalysis, finds them so inadequate as to be wholly confused or puerile or both; or else so technical that he cannot make head nor tail of them. The author of this volume has set out to tell the story in a way that will be fully intelligible to any person of education who has made some study of psychology, without following all the intricacies of Freud and Jung.

Nor has Miss Bradby produced simply a dry and logical treatise, but has made an attempt (highly successful) to show how the studies of the psychologists and the psychoanalysts may be made to add meaning and value to our daily lives.

The book contains five parts: I. The Unconscious Mind; II. Psychoanalytic Theories; III. Dreams; IV. Unconscious Primitive Traits in Present-day Thought; V. Place of Psychoanalysis in Life; VI. Light on Biography from Psychoanalysis. Under these six main headings are grouped nineteen chapters which subdivide the material conveniently.

The volume is about the size of the ordinary novel and is immensely more interesting than most of the fiction we see these days; and while it purports to be written chiefly for the general public, there are few physicians, saving only those who

are accomplished specialists in psychiatry and psychotherapeutics, who cannot study this work with great pleasure and profit.

We heartily recommend it to all our readers, with the feeling that it will add to their professional efficiency.

GROVER: HIGH FREQUENCY PRACTICE

HIGH FREQUENCY PRACTICE; For Practitioners and Students. *By Burton Baker Grover, M.D. Illustrated with Engravings. Thoroughly Revised and Rewritten. Fourth Edition. Kansas City: The Electron Press.* 1925. *Price* $6.00.

The use of physical methods in the treatment of disease is growing by leaps and bounds, and among these methods the various applications of high frequency currents offer a fascinating field, beset, however, with many technical difficulties.

He who uses drugs must be thoroughly familiar with their physiologic effects in health and disease, and he who would prescribe high frequency currents must be equally conversant with their physical and physiologic effects. This fact has been held in mind by Dr. Grover in writing this book.

This, the fourth edition in four years, has been considerably enlarged and largely rewritten. Several new chapters have been added.

The book opens with a study of the physics of electricity in general and high frequency currents in particular, occupying 113 pages and illustrated by diagrams. There follow chapters on Medical and Surgical Diathermy, Blood Pressure, Diseases of the principal organs and systems, Pain, etc. There is a glossary of technical terms, a questionnaire for self-examination by the student and a general index.

The type and paper are good and the binding substantial.

A satisfactory introduction to the use of high frequency currents in medicine.

SAVILL: CLINICAL MEDICINE

A SYSTEM OF CLINICAL MEDICINE; Dealing With the Diagnosis, Prognosis, and Treatment of Disease; for Students and practitioners. *By Thomas Dixon Savill, M.D. (Lond.). Seventh Edition. New York; William Wood & Company.* 1925. *Price* $9.00.

The physician who sees a patient observes first the symptoms which he presents and from these works back to the underlying causes. A textbook following this order of procedure should be very helpful, and here we find one.

The general plan is, first, to describe leading symptoms and then follow these back to determine the various diseased conditions which may cause them.

The chapters divide the body into various areas (as the Pulse and the Arteries; the Lungs and Pleura; the Abdomen; the Liver and Spleen; etc.) and discuss the symptoms which may arise in these areas and the causes which may produce them.

There are four full-page plates, in colors, and 176 cuts and diagrams in the text. The book contains 50 more pages than have previous editions.

The arrangement of the material is excellent. A free use of bold-face type and italics catches the eye and holds the attention, as well as giving the pages an open and attractive appearance. The binding is substantial and the index ample.

Even those who have one or more of the usual systematic treatises on the practice of medicine should find this book interesting and directly helpful in their daily practice, and we recommend it to the attention of internists and practitioners.

POULTON: PRACTICE OF MEDICINE

TAYLOR'S PRACTICE OF MEDICINE. *By E. P. Poulton, M.A., M.D., Oxon, F.R.C.P. Lond., With the Assistance of C. Putnam Symonds, M.A., M.D., Oxon, F.R.C.P. Lond. and H. W. Barber, M.A., M.B. Camb., F.R.C.P. Lond. Thirteenth Edition. With 48 Plates (8 Colored) and 93 Text-Figures. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street.* 1926. *Price* $9.00.

The appearance of this, the 13th, edition of Taylor's Practice of Medicine only three years after the publication of the 12th edition indicates that the work must be meeting a popular demand.

A number of new articles have been added, necessitating an increase of nearly 100 pages in the text, as well as 24 new plates (8 of them in colors) and 6 text figures.

The author and his collaborators are all Fellows of the Royal College of Physicians, London, and well-known British physicians, and they seem to have produced a work which is reasonably up to date.

The paper in this book is of rather poor quality and the typography is close and not especially attractive and the binding does not seem particularly substantial.

We feel that those who have a work on the practice of medicine, published within the last three or four years, will gain little by possessing this volume. Those who seek various points of view on medical subjects will here find the British ideas well set forth.

ANDERS & BOSTON: DIAGNOSIS

A TEXT-BOOK OF MEDICAL DIAGNOSIS. *By James M. Anders, M.D., Ph.D., LL.D., Professor of Medicine, Medico-Chirurgical College, Graduate School of Medicine, University of Pennsylvania; and L. Napoleon Boston, A.M., M.D., Associate Professor of Medicine, Graduate School of Medicine, University of Pennsylvania. Third Edition, Entirely Reset. With 555 Illustrations, 21 in Colors. Philadelphia and London: W. B. Saunders Company.* 1925. *Price* $12.00.

So much progress has been made in the field of medical diagnosis in the last ten or fifteen years that the older books lack much material which we all now expect to find in a work on that subject. In order to meet modern conditions the authors of

this standard textbook on diagnosis have entirely revised this (third) edition and it has been reset and, so great is the volume of new material, even recopyrighted.

The list of additions fills half a page of closely set print and includes such important matter as filterable viruses, blood chemistry, electrocardiography, basal metabolism, food allergy, epidemic encephalitis, liver function tests and many others. The extensive additions with respect to the diagnosis of various endocrine disorders are especially meritorious.

The second edition contained 1193 pages of text and 53 pages of index; the third edition has 1366 pages of text and 55 of index, but the book is no larger. This is made possible by the use of thinner paper which, in places, allows the print to show through somewhat, but not to any serious extent.

The recital of illustrative cases, which has been a feature of former editions, has been omitted in order to make room for new material. Many will consider this a distinct loss. The diagnostic tables have been retained and brought up to date.

The general idea has been to give the general practitioner a full and reliable guide to the recognition of diseases and the pathological processes which underlie them. Purely technical details have been simplified as much as possible.

Every physician whose latest textbook on medical diagnosis is more than five years old needs a new one, and we know of no book more complete and up to date than this.

TAYLOR: PSYCHOTHERAPY

PSYCHOTHERAPY; Mental Elements in the Treatment of Disease. Harvard Health Talks, 14. *By Edward Wyllys Taylor, James Jackson Putnam, Professor of Neurology in Harvard University. Cambridge: Harvard University Press.* 1926. *Price* $1.00.

A brief and readable history of the development of modern psychotherapy from the incantations of the witch-doctors and medicine-men of early historical times. Can be read in an hour and is of more value to the layman than to the physician.

BERGY: DETERMINATIVE BACTERIOLOGY

BERGEY'S MANUAL OF DETERMINATIVE BACTERIOLOGY: A Key for the Identification of Organisms of the Class Schizomycetes. *By David H. Bergey, Assisted By a Committee of the Society of American Bacteriologists, With an Index by Robert S. Breed. Second Edition. Baltimore: The Williams and Wilkins Company.* 1925. *Price* $5.50.

There has been considerable confusion in bacterial nomenclature due to the fact that different investigators have given different names to one and the same organism. This book is of value, in that this confusion will be overcome in the future, and it serves as a guide in the identification of unknown organisms. The interest which the Society of American Bacteriologists has shown in this work is convincing proof that there was a need for this book. It is the foundation to which can be added the classification of new organisms as they are discovered.

The book is of value to the student of medicine and bacteriology.

F. J. H.

SEELIG: MEDICAL HISTORY

MEDICINE; AN HISTORICAL OUTLINE. *By M. G. Seelig, M.D., Professor of Clinical Surgery in the Washington University School of Medicine. Baltimore: Williams & Wilkins Company.* 1925. *Price* $2.25.

Most of us do not read enough medical history. Enthusiasm is vitally necessary to success in any line of work, and a knowledge of the history of one's profession or calling is a great breeder of enthusiasm.

There are many elaborate histories of medicine and they are very interesting, but few busy practitioners have time to study them.

Here is a little volume which will give the reader a satisfactory groundwork in the history of medicine and familiarity with the greatest figures who have adorned the profession.

The text is divided into eight chapters, dealing with the various significant epochs in medical history, and there are 48 excellent, full-page portraits of the men who have made that history.

The book is well made and printed and we have had occasion to recommend it in personal letters to busy men who wished to gain a fundamental knowledge of the history of medicine with the least expenditure of time and energy.

JAEGER: A. D. 2200

THE QUESTION MARK. *By M. Jaeger. New York: The Macmillan Company.* 1926. *Price* $2.00.

Suppose we were relieved of all the drudgery of life and found ourselves living under conditions where we could be provided with all the comforts and luxuries now associated with considerable wealth, at the cost of only two or three hours' work a day, what would we do with the time and energy so released?

The author of this book has assumed all the mechanical advances now foreshadowed as possible within the next 200 years, and also the socialization of the world, as described by Edward Bellamy, H. G. Wells and others, and has set out to show, in the form of a novel, what effects these changes would have upon the *people* of the twenty-second century.

She finds society still divided into classes, not, as now, upon the basis of wealth and social standing—for in these respects all are equal—but according to their mental powers. We thus find "intellectuals" and "normals," and there is the same lack of understanding between the classes as we now see.

The hero of the tale, who is carried over into the future by means of self-hypnotism and the efforts of a studious physician and researcher of the New Age, is at first enchanted by the easy and beautiful life which these people lead, but, as time goes on, he finds that happiness is not universal and that there is a worm at work in the heart of this rose of social and material equality.

It would be a shame to spoil the story by going into further details. Suffice it to say that the book is a powerful thought provoker, and that when you have closed the covers you will discover that your mind is still busy with the question, what is wrong with this utopian civilization of the year 2200?

HALL: ULTRAVIOLET RAYS

ULTRAVIOLET RAYS IN THE TREATMENT AND CURE OF DISEASE. *By Percy Hall, M. R. C. S. (Eng.), L. R. C. P. Lond.), With Introductions by Sir Henry Gauvain, M.A., M.D., M.C. and Leonard E. Hill, M.B. F.R.S. St. Louis: C. V. Mosby Company.* 1924. *Price* $3.75.

The book is brief and written from the British standpoint.

There is a short description of the physics and chemistry of sunlight; an abbreviated history of heliotherapy, with natural and artificial light; and chapters on the various sources of ultraviolet energy and indications for their use.

The author favors the tungsten arc lamp as a source of energy and describes it in some detail. The other apparatus is very briefly described and the illustrations are not particularly helpful.

The book is not so useful as some others.

RUSSELL: ULTRAVIOLET RADIATION

ULTRAVIOLET RADIATION AND ACTINOTHERAPY. *By Eleanor H. Russell, M.D., B.S., and W. Kerr Russell, M.D., B.S., with Foreword by Sir Oliver Lodge, F.R.S., D.Sc., LL.D. and Sydney Walton, C.B.E., M.A., B.Litt. New York: William Wood & Company; Edinburg, E. & S. Livingstone.* 1925. *Price* $3.50.

About two-thirds of this volume is devoted to a discussion of the history and the chemical, physical and biological properties of ultraviolet rays, with 36 pages on technic, especially that of group treatments in hospitals.

There is a rather extensive list of the various maladies in which ultraviolet energy is said to have been used with success. Most of them sound fairly reasonable. This is followed by a brief discussion of some of the conditions enumerated, with a few case reports.

The book is well printed, on good paper, and the illustrations are rather interesting. On the whole, it ought to be worth the price to one who is a beginner in the use of ultraviolet radiations.

ABDERHALDEN: LEHRBUCH DER PHYSIOLOGIE

LEHRBUCH DER PHYSIOLOGIE IN VORLESUNG; II TEIL. *Von Emil Abderhalden. Abbildung. Berlin: Urban & Schwartzeberg.* 1925.

ABDERHALDEN: BIOLOGISCHE ARBEITSMETHODEN

HANDBUCH DER BIOLOGISCHEN ARBEITSMETHODEN: *Unter Mitarbeit van über 600 bedeutenden Fachmänner herausgegeben von Dr. Emil Adberhalden.* Abt IV, Angewandte chemische und physikalische Methoden, Teil 4, Heft 2, Teil 9, Heft 5; Abt IX, Methoden zur Erforschung der Leistungen des tierschen Organismus, Teil 3, Heft 2, Die Methoden der phylogenetischen (stammesgeschichtlichen) Forschung; Abt XII, Methoden zur Erforschung der leistungen von einzelligen Lebewesen, Heft 4 Spezielle Methoden. Berlin: Urban & Schwartzenberg. 1925.

BRUGSCH: BIOLOGIE DER PERSON

BIOLOGIE DER PERSON; EIN HANBUCH DER ALLGEIMEINEN UND SPEZIELLEN KONSTITUIONSLEHRE. *Unter Mitarbeit zahlreicher Fachmänner herausgegeben von Th. Brugsch und F. H. Lewy. Berlin: Urban & Schwarzenberg.* 1926.

Medical News

A VILLAGE HEALTH ASSOCIATION

Small towns sometimes have trouble in obtaining medical service.

Altura, Minnesota, a town of 250 people, has solved the problem by organizing a Health Association which guarantees its physician a moderate salary, with a chance to earn more.

This plan has been in operation for nearly a year and, so far, is working well.

HEALTH EXAMINATIONS IN NEW YORK

The Medical Society of the State of New York has furnished every member with a copy of the Manual of periodic health examinations, issued by the American Medical Association.

This is a good example for medical societies to follow, as the Manual is something every physician ought to have.

DEFECTIVE VISION IN CHILDREN

Out of 2,044 children under school age, who were recently tested in Gary, Indiana, by Federal investigators, 36.1 percent were found to have defective vision in varying degrees.

Copyright: Keystone View Co.

THE FIRST WOMAN DOCTOR OF JAPAN

Miss Asaka Nakao, Japan's first woman physician, is shortly to visit the United States. She is a graduate of the Tokyo Female Medical College and will further pursue her studies in medicine in America.

Copyright: Underwood & Underwood

HE WILL NOT BE TRIED FOR OFFENSE 45 YEARS AGO

Dr. Edwin Turner Rowe Osbaldeston, of Asbury Park, N. J., 93 years old and a veteran of the Crimean War and of Garabaldi's campaign for Italian freedom, who was recently charged by a 91-year-old Deputy Sheriff, of Binghamton, N. Y., with jail-breaking and horse-stealing, 45 years

ago, will not have to stand trial for these offenses.

Governor A. H. Moore, in refusing to sign extradition papers for Dr. Osbaldeston, stated that, if the crime was actually committed, it is time to forget it.

Copyright: Underwood & Underwood

MEDICAL HERO OF ALASKA

Dr. Curtis Welch, who last year fought the diphtheria epidemic at Nome, Alaska, when the world was thrilled by the epic race of dog sledges to carry antitoxin to the striken city.

Dr. Welch is the Public Health Physician at Nome and the only medical man within hundreds of miles. He has been resting ir the United States for a few months and is now on his way back to look after the gold-hunters and the members of the aerial polar expeditions.

CIVIL SERVICE EXAMINATIONS

Applications for appointment as Head Nurse will be received up to May 11, 1926. Salary $1,140 a year, plus room, board and laundry.

Competitors will not be required to report for examination at any place, but will be rated on their education, training and experience.

Receipt of applications for appointment as trained Nurse (psychiatric) will close May 15, 1926. Salary $135.00 to $150.00 a month for women and $5.00 more for men. Must have had one to two years' experience in a hospital for the insane.

For full information and application blanks address the United States Civil Service Commission, Washington, D. C.

PLANS FOR NEW PASSAVANT HOSPITAL, CHICAGO

Some of the leading people in Chicago are launching an enthusiastic campaign to raise $1,500,000.00 for the construction of a new building for the Passavant Hospital.

The site will be on Northwestern University's new McKinlock Campus, on the near North Side, where a great medical center is in process of development.

The new building is to have 200 beds for patients and a nurses' home to accommodate 100. It will also house Chicago's first dental operating unit.

SPECIAL COURSE IN STOMATOLOGY

The American Stomatological Association, in cooperation with the Faculty of the Post-Graduate Medical School of Stomatology at New York City, announce a special course of ten lectures for graduates in dentistry and medicine in "Stomatology and Focal Infection" to begin October, 1926. For information, address the Registrar, Post-Graduate Medical School of Stomatology, 135 Elliot Place, New York City.

FOURTH OF JULY CASUALTIES

The Surgeon General of the U. S. Public Health Service reports that last year there were 111 persons killed and 1,030 injured as the direct result of celebrating with fireworks last Independence Day. Of the injured, 148 will probably lose the sight of one or both eyes. It is not too early to begin to educate your communities along these lines.

POPULAR INFORMATION ABOUT THE TEETH

A popular magazine of mouth hygiene called *The Gateway to Health* is now getting nicely under way. It is breezy, interesting and informative.

Send for This Literature

To assist doctors in obtaining current literature published by manufacturers of equipment, pharmaceuticals, physicians' supplies, foods, etc., CLINICAL MEDICINE will gladly forward requests for such catalogues, booklets, reprints, etc., as are listed from month to month in this department. Some of the material now available in printed form is shown below, each piece being given a key number. For convenience in ordering, our readers may use these numbers and simply send requests to this magazine. Our aim is to recommend only current literature which meets the standards of this paper as to reliability and adaptability for physicians' use.

Both the literature listed below and the service are free. In addition to this, we will gladly furnish such other information as you may desire regarding additional equipment or medical supplies. Make use of this department.

C-22 Biological Products for Human Use. With Indications for Use, Dosage, Price List, etc. Gilliland Laboratores.

C-29 Oral Health, and the Relation of Diseases of the Teeth and Gums (Pyorrhea) to Diseases of the Body. 24-page booklet. The Dentinol & Pyorrhocide Co.

C-30 Helping the Cell to Help Itself. 32-page booklet by The Alkalol Co.

C-31 The Romance of Digitalis — The Story of Its Discovery. 12-page booklet by Hoffman-La Roche Chem. Co.

C-55 Your Prestige and Profit. 8-page booklet. The Carroll Dunham Smith Pharmacal Co.

C-65 Intestinal Infections of Children. 14-page booklet by Battle & Co.

C-69 Gonosan. 4-page folder by Riedel & Co.

C-72 Direct Medication by the Intravenous Method. 16-page booklet by Intranvenous Products Co. of America.

C-73 How to Use Pan-Secretin Co. with Most Success in Diabetes. 10-page booklet by Harrower Laboratory.

C-75 Intestinal Rectal and Anal Pathology. Booklet by Nujol Laboratories.

C-77 The Source, Nature and Amount of the Nutritive Elements in Mellin's Food. 14-page booklet. Mellin's Food Co.

C-81 Auto-Intoxication. 20-page booklet by Burnham Soluble Iodine Co.

C-84 Storm Binder and Abdominal Supporter. 4-page folder by Dr. Katherine L. Storm.

C-91 The Colden Way. 8-page booklet by Century National Chemical Co.

C-93 A New Hypnotic for the Treatment of Serious Insomnia. 4-page folder by Ciba Co.

C-172 Phyllosan in Anemia, Chlorosis and Wasting Diseases. 4-page booklet. Merck & Co.

C-198 Pluto Water. Its Medicinal Values. 16-page booklet. French Lick Springs Hotel Co.

C-211 Fibrogen. 8-page booklet. Wm. S. Merrell Co.

C-222 Rabies Vaccine. 24-page booklet. Parke, Davis & Co.

C-231 Instant Relief for Cold in the Head and Sore Throat, Hay fever and Summer Colds. 4-page folder. Schoonmaker Laboratories.

C-238 Ethical Medicinal Specialties. 8-page booklet. A. H. Robins Co.

C-249 A Sinusoidal Manual, by T. C. Cornell, M.D. 54-page booklet. McIntosh Electric Corp.

C-255 Lunosol, by Herman Hille, Ph.D. 16-page booklet. Hille Laboratories.

C-292 Epidemiology and Public Health. Descriptive folder. C. V. Mosby Co.

C-307 Modern Aspects of Syphilis. 16-page booklet. Battle & Co.

C-309 The Journal of Organotherapy. 95-page booklet published monthly. G. W. Carnrick Company.

C-311 The Cure of Cystitis, Pyelitis and other Inflammatory Conditions of the Urinary Tract. Chicago Pharmacal Co.

C-330 A Rational Procedure in Summer Diarrhea. 4-page folder. Mellin's Food Company.

C-380 Nativell's Crystallized Digitaline. 8-page booklet. E. Fougera & Co.

C-394 Rheumatism—Its Modern Conception and Treatment. 14-page booklet. Battle & Co.

C-403 Medinal. 4-page folder. Schering & Glatz, Inc.

C-668 Electrocoagulation in Occlusion of the Rectum, by Dr. H. Bordier. H. G. Fischer & Co.

C-675 The Largest Organ in the Body THE LIVER is Usually the Most Neglected and Least Understood. Vass Chemical Co.

C-677 The Ideal Tampon. C. B. Moyer & Co.

C-680 Agar of No Consequence in Emulsions of Liquid Petrolatum. Standard Oil Co.

C-682 A Selected List of Special Formulas. 16-page booklet. Maltbie Chemical Co.

C-683 Milk Modification for Adult Feeding. Wm. S. Merrell Co.

C-685 Theocalcin—A Diuretic and Vascullar Remedy. E. Bilhuler, Inc.

C-687 How Yeast Vitamines Help the Physician. Carroll Dunham Smith Pharmacal Co.

C-689 A Few Notes Regarding Psychoanalysis. 32-page booklet. Fellows Med. Mfg. Co.

C-691 Mineral Waters Therapeutically Considered. 24-page booklet. Hiram Ricker & Co.

C-693 What Do the Phagocytes Mean to Your Patients? Carroll Dunham Smith Pharmacal Co.

C-695 Loeser's Intravenous Solution of Mercurochrome. New York Intravenous Laboratory.

C-696 The Future of Therapeutics, by W. Willard Armstrong, M.D. C. V. Mosby Co.

C-699 Peripheral Nerve Lesions by S. L. Osborn, B.P.E. 10-page booklet. Victor X-ray Corp.

C-700 "The Pot of Gold at the End of the Rainbow." Reed & Carnrick.

C-701 The Calcreose Detail Man. 16-page booklet. Maltbie Chemical Co.

C-702 The Fischer Type "S" 30 Milliampere Radiographic Unit. 10-page booklet. H. G. Fischer & Co., Inc.

C-703 The Oft Unrecognized Importance of Acid Intoxication. 8-page booklet. Vass Chemical Co.

C-704 Horlick's Malted Milk — Use in Nervous Disorders. Horlick's Malted Milk Co.

C-705 The Price We Pay for Modern Civilization is Drawn Out of the Nervous System. Vass Chemical Co.

C-706 The Prevention of Fecal Retardation. William R. Warner & Co., Inc.

C-707 Fischer Improved Interrupterless X-Ray Transformer Type "2B." 14-page booklet H. G. Fischer & Co.

C-708 Leading S. & G. Products. 16-page booklet. Schering & Glatz, Inc.

C-709 Price List of S. & G. Products, 1926. 24-page booklet. Schering & Glatz, Inc.

C-710 The Quartz Lamp, April 15, 1926. Hanovia Chem. & Mfg. Co.

C-711 Accessories for Victor Quartz Lamps. Bulletin No. 254. Victor X-Ray Corp.

C-712 Descriptive Price List. Ernst Bischoff Co., Inc.

C-713 Victor Roentgen Tables, Roentgenoscopes and Tube Stands. Bulletin No. 206. 37-page booklet. Victor X-Ray Corp.

C-714 A Page from the Life of John Doe. 12-page booklet. Reed & Carnrick.